S1080 HD™ NETWORK CAMERA

GBO Technology (USA) Inc.

User's Guide

S1080 Series: Ultra Low Light Camera

BETTER VIDEO ALL DAY/ALL NIGHT

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Touch Screen Users:

The instructions in this manual are written for regular personal computers. For touch screen computers, simply substitute the word "touch" for "click on" or "select".

1.0 READY CAMERA FOR INSTALLATION

1.1 CONFIGURE GBOT S1080 IP NETWORK CAMERA FOR THE LENS TYPE

The two most commonly used types of lenses on the GBOT S1080 IP Network Camera are the manual iris lens and the DC Iris (direct control iris) lens. The factory-set default is for the manual iris lens

If a **manual iris lens** is being used, the camera is pre-configured and requires no action.

If a **DC Iris lens** is being used, a DIP switch setting on the back of the camera needs to be changed.

Figure 1.1 Example of a DC Iris Lens and its Cable

At the back of the camera there are two DIP switches, #1 and #2. Flip DIP switch #1 into position 2 when using a **DC Iris lens** (as shown in Figure 1.2).

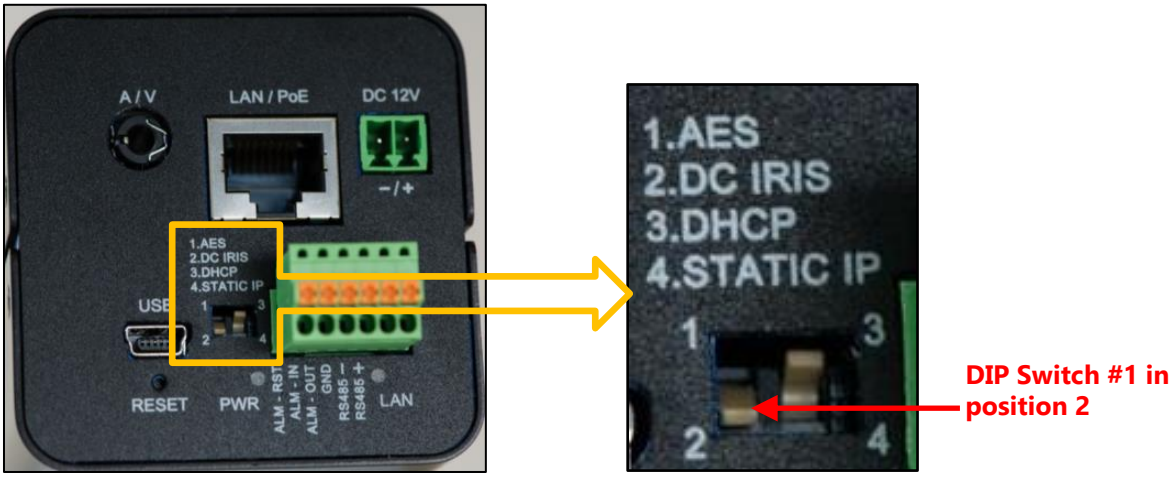


Figure 1.2 Back of Camera Showing DIP #1 in Position 2

1.2 RESET FACTORY DEFAULT VALUES

1.2.1 RESET Button

1. While the camera is powering up, either via the POE switch or through its power supply cable, use the end of a bent paperclip to press and hold the **RESET Button** in the camera's back panel for approximately 5 (five) seconds and then let go (see Figure 1.3).

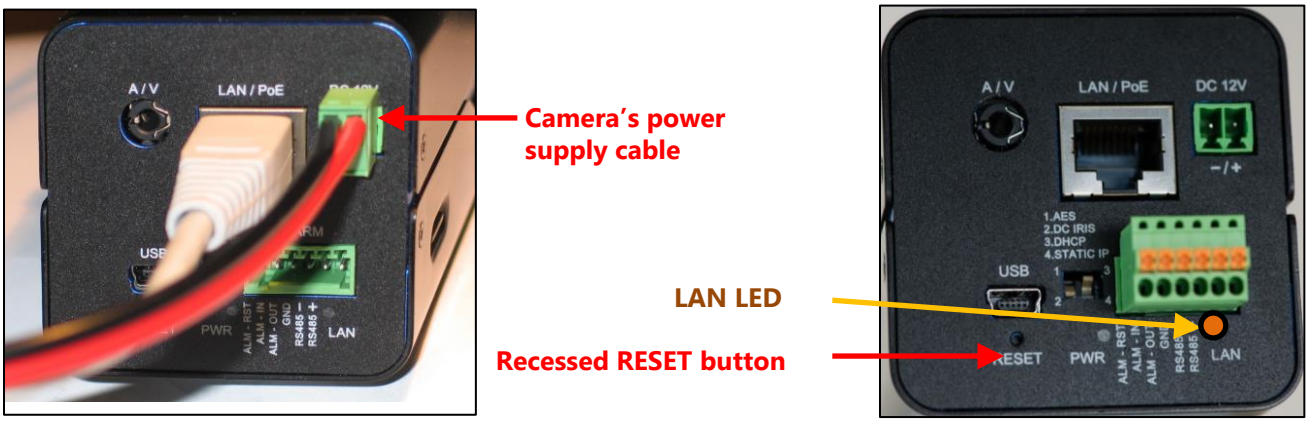


Figure 1.3 Location of RESET Button and LAN LED on Camera Back

2. The **LAN LED** first turns **red** and then **orange** to show you that the camera is rebooting. This causes the camera to revert all of its settings, including its IP address, to **factory default values**. This provides the cleanest boot, sometimes called a "stone age" boot.

Table 1-1 Factory Default Values

RESET Button (Factory Default Values)	
Default Static IP Address	192.168.1.168
Netmask	255.255.255.0
Default Gateway	192.168.1.1

2.0 INSTALLATION

There are three ways to install the GBOT S1080 IP Network Camera:

(1) By connecting the camera directly to your personal computer (PC). See **Section 2.1, Camera Connected Directly to a Personal Computer**.

(2) By connecting the camera to a standalone Power-over Ethernet (POE) switch that is connected to your PC. See **Section 2.2, Standalone POE Switch Installation**.

(3) By connecting it to a network via a POE switch. See **Section 2.3, UPNP- and DHCP-Enabled Network** Installation**.**

2.1 CAMERA CONNECTED DIRECTLY TO A PERSONAL COMPUTER

These instructions describe how to use the **OnVIF Device Manager** application to interface with the camera's software with the camera connected directly to a standalone PC.

Step 1 Download "OnVIF Device Manager"

From the internet, download the **OnVIF Device Manager** application from http://sourceforge.net/projects/onvifdm/. After the application has down-loaded, the **OnVIF** icon displays on your desktop.

Figure 2.1 OnVIF Device Manager Icon

Step 2 Power On Standalone PC

Before connecting the GBOT S1080 IP Network Camera, first power on the standalone PC **without** the Ethernet cable connection, and, second ensure that the PC's Ethernet interface is configured to use DHCP to obtain an IP address automatically. In this case, because there is no DHCP server running on the network, the PC will obtain an Auto-IP address in the 169.254.0.0 class B subnet. See **Section 4.0, IP address Provisioning via DHCP**, for detailed information on required PC settings.

Step 3 Connect Camera to Your Computer

Using an Ethernet cable, connect one end of the cable to the LAN/POE slot in the back of the camera and the other end to your computer (see Figure 2.2).

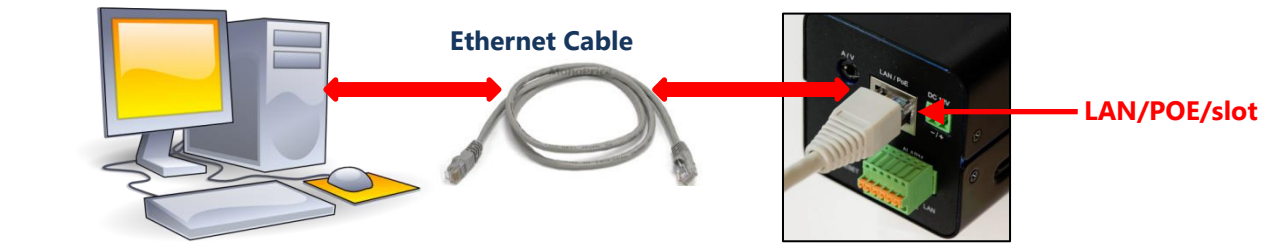


Figure 2.2 Camera Connected Directly to PC

Step 4 Power On Camera with DC Power Supply

3. Insert the connector end of the camera's power supply cable into the DC 12V receptacle located on the back of the camera. Use care to insert it with the slots in the correct position (see Figure 2.3). Plug the electrical end of the power supply cable into a power outlet.

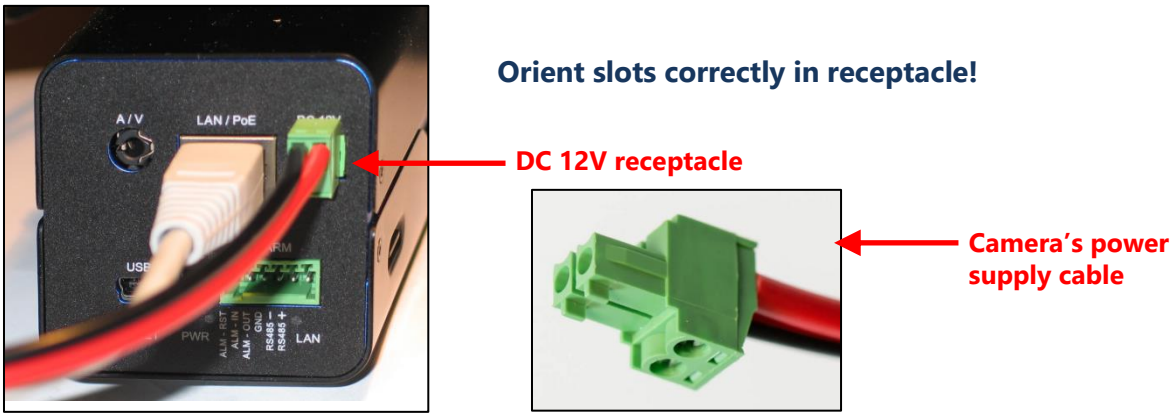


Figure 2.3 12V DC Power Supply Cable Inserted into Receptacle in Camera Back

4. Wait until the two camera LEDs light up. Initially they are red in color, then change to orange; when they both turn green, the camera is "on" and working correctly (see Figure 2.4).

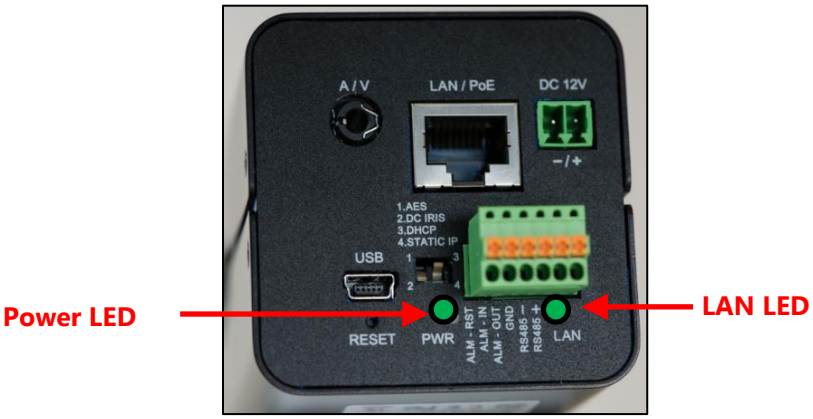


Figure 2.4 Location of LAN and Power LEDS on Camera Back

Step 5 Open "OnVIF Device Manager"

5. Open the **OnVIF** application by double-clicking on its icon on your desktop and its **Main Screen** opens.

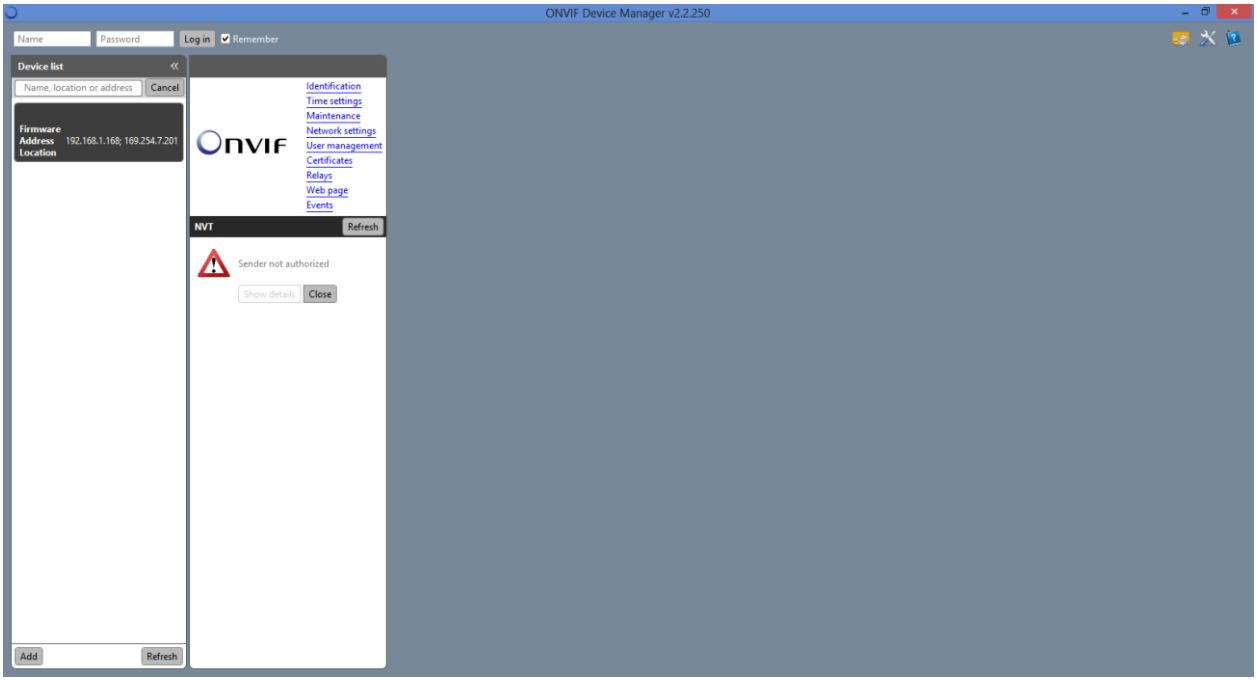


Figure 2.5 OnVIF Main Screen

6. At the **OnVIF Main Screen**, check the **Remember** (see Figure 2.6).
7. Enter your **Name** and **Password**:
   - Name: **admin**
   - Password: **9999**

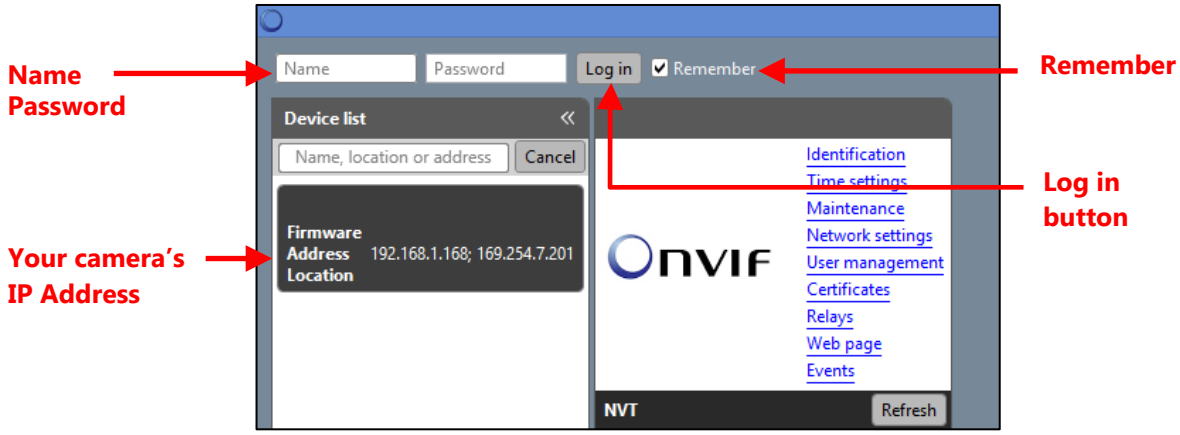


Figure 2.6 Log In Screen

8. Click on the **Log in** button.
9. Your camera's **IP address** is shown in the gray box as **Address.**

Step 6 Change Settings

10. Click on the **wrench icon** located at the top right side of the **OnVIF Main Screen**. The **Application settings** dialog box opens.

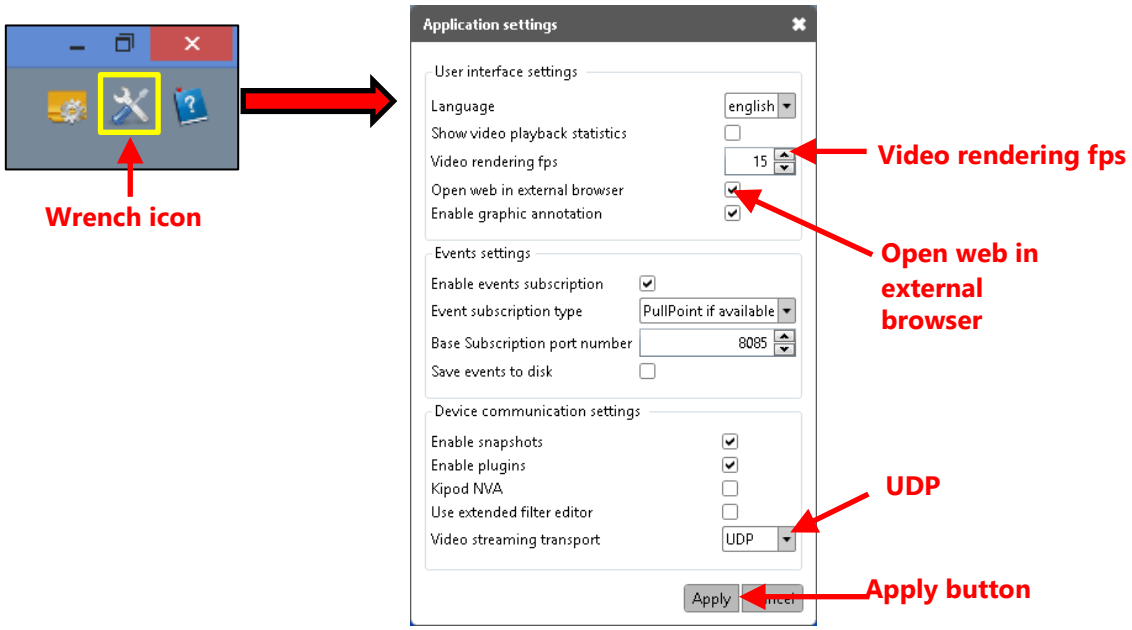


Figure 2.7 Wrench Icon and Application Settings Screen

11. Change the **Video rendering fps** to **15**.
12. Click on **Open web in external browser**.
13. Change **Video streaming transport** to **UDP** from the drop-down list.
14. Click on the **Apply** button and wait for the changes to take effect.

Step 7 Open Web Page

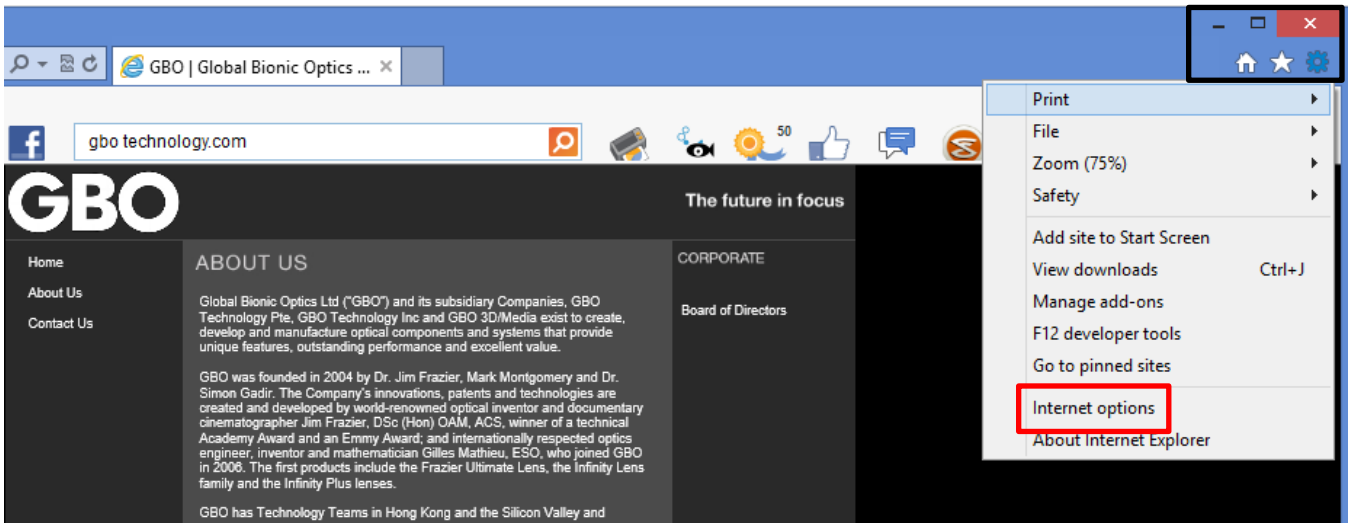
1. At the **OnVIF Main Screen** (see Figure 2.5), click on **Web page** and a black screen opens with a message that asks you to allow add-ons before the **GBOT IP Network Camera Log In Screen** can be opened (see Figure 2.11).
2. Click on the **Allow** button, and the **GBOT IP Network Camera Log In Screen** opens with the same question at the bottom of the screen (see Figure 2.12).
3. Click on the **Allow button** again, and you can log in (see **Step 10, Log In**). Skip **Step 7** and **Step 8**.

NOTE:

If the GBOT IP Network Camera **Log In Screen** does not open after approximately one minute, the default Home Page setting on your browser may be causing a long timeout. Follow the instructions in **Step 8, Set Browser Default to Blank**, below, to correct this.

Step 8 Set Browser Default to Blank

1. At your **Internet Explorer** screen, click on the **Settings** icon located in the upper right-hand corner of the screen.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Board of Directors
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File
Zoom (75%)
Safety
Add site to Start Screen
View downloads Ctrl+J
Manage add-ons
F12 developer tools
Go to pinned sites
Internet options
About Internet Explorer

Figure 2.8 Internet Explorer Screen

2. Click on **Internet options** and the **Internet Options Screen** opens.

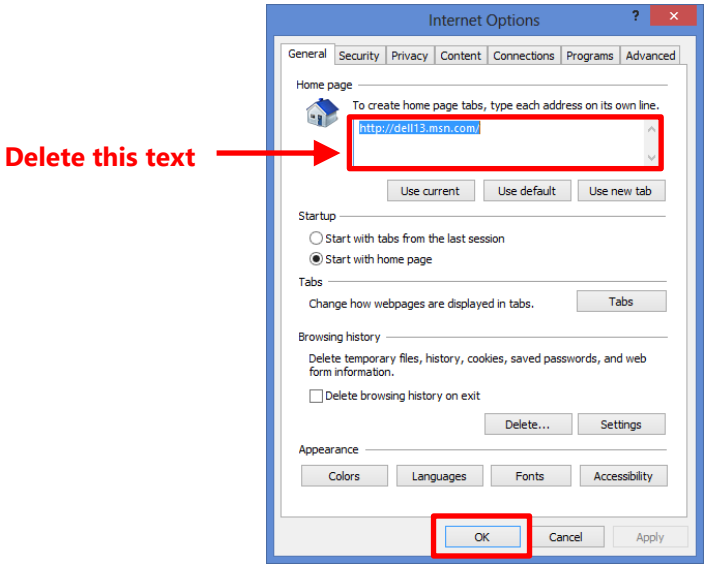


Figure 2.9 Internet Options Screen

3. Delete the text in the **Home Page** text box and click on the **OK** button.

Step 9 Open Web Page – After Changing Browser Setting

1. Back at the **OnVIF Main Screen**, click on **Web Page** again.

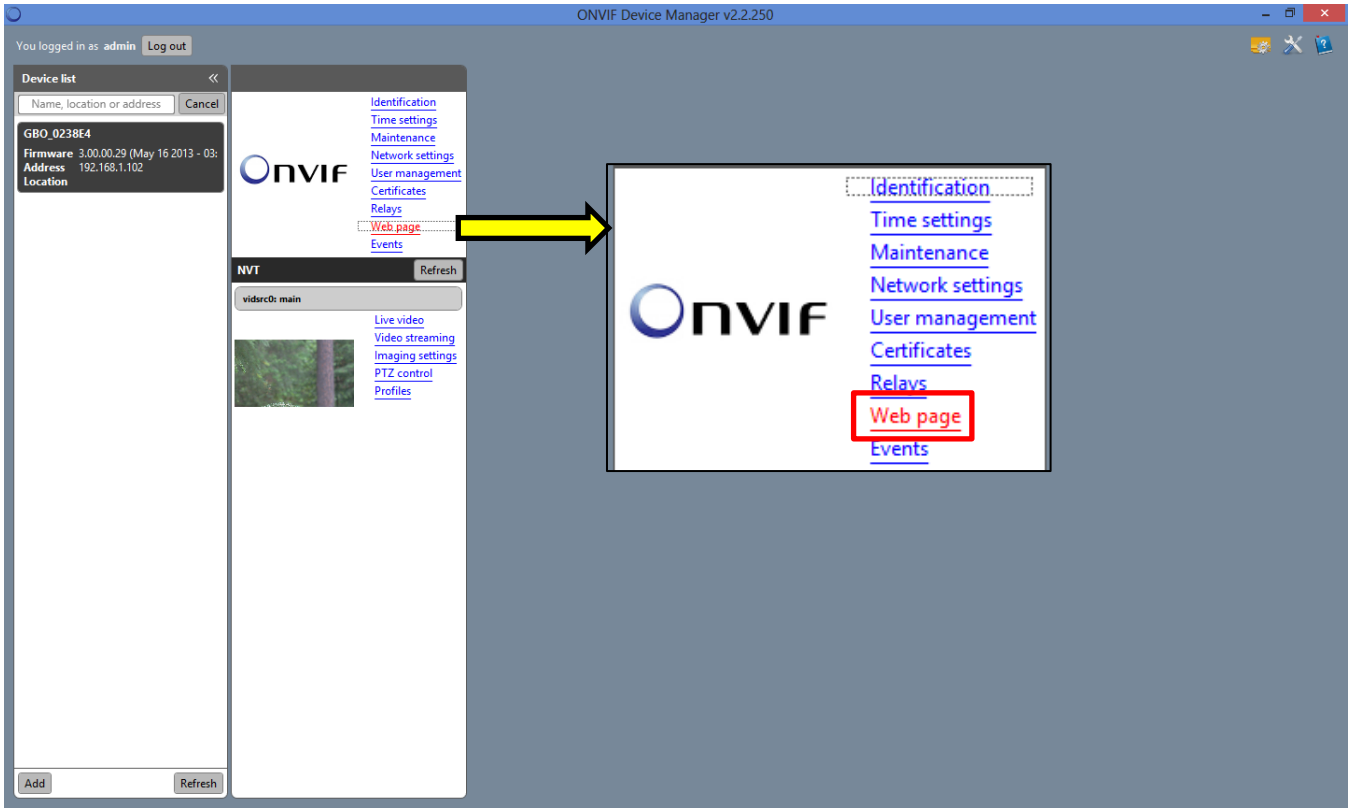


Figure 2.10 OnVIF Main Screen (2)

2. Click on the **Allow button** (see Figure 2.11), and the **GBOT IP Network Camera Log In Screen** opens with the same question at the bottom of the screen (see Figure 2.12).
3. Click on the **Allow button** again, and you can log in (see **Step 10, Log In**).

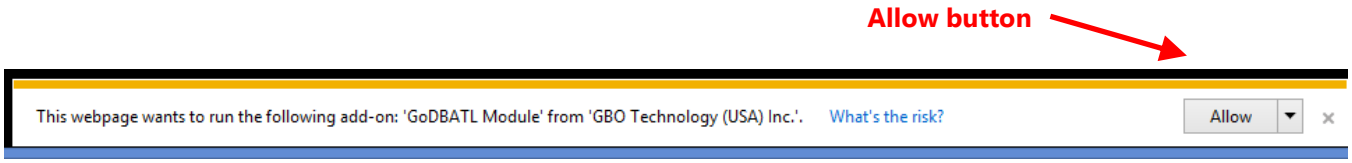

Allow button
This webpage wants to run the following add-on: 'GoDBATL Module' from 'GBO Technology (USA) Inc.'.
What's the risk?
Allow

Figure 2.11 Allow Add-ons Screen

Step 10 Log In

1. Enter the **User Name** (**admin**) and **Password** (**9999**), and then click on the **Submit** button.

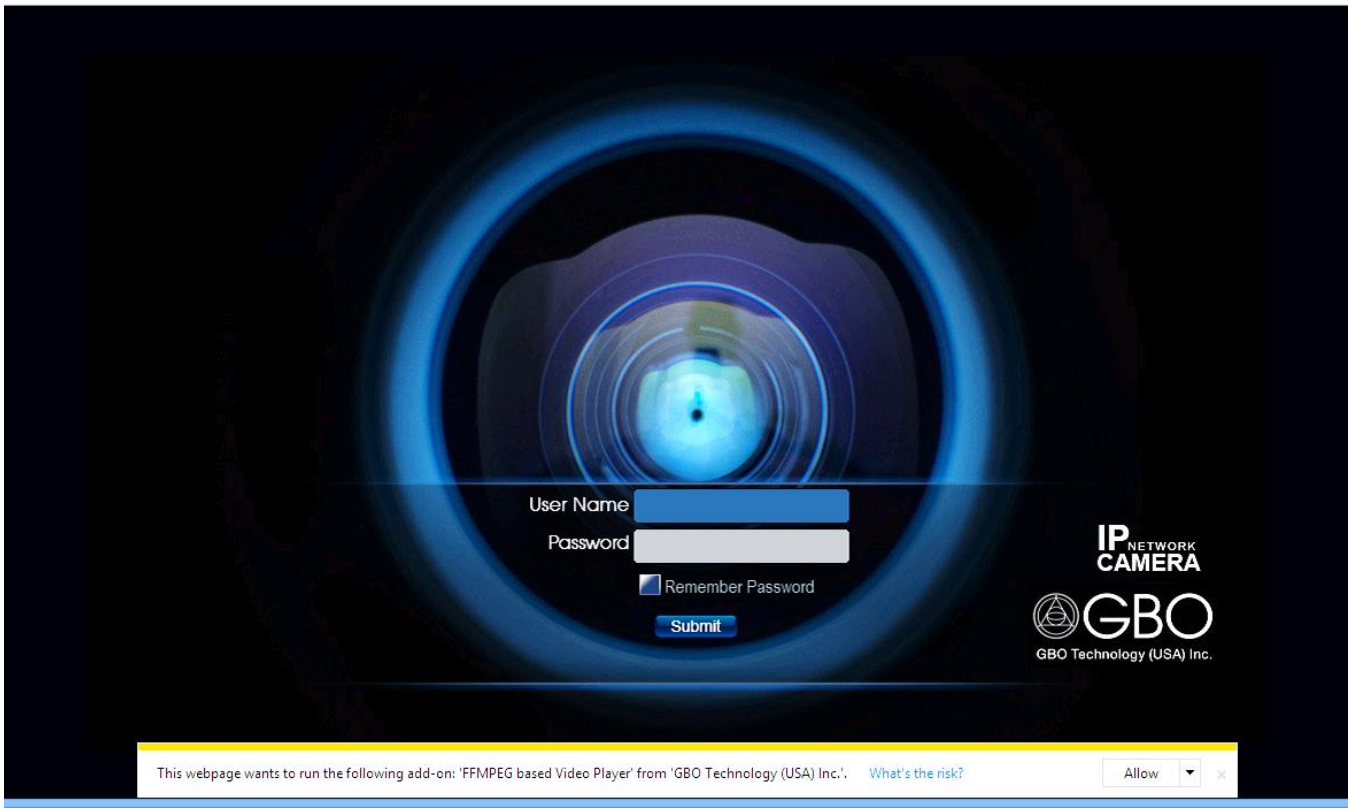


Figure 2.12 GBOT IP Network Camera Log In Screen

Figure 2.13 Completed Log In Screen

2. After successful login, a live video from the camera starts streaming in the **Live Video** section of the **Web Browser GUI Screen** (see Figure 2.14). In this documentation, this screen is also identified as the **Live Video Screen**.

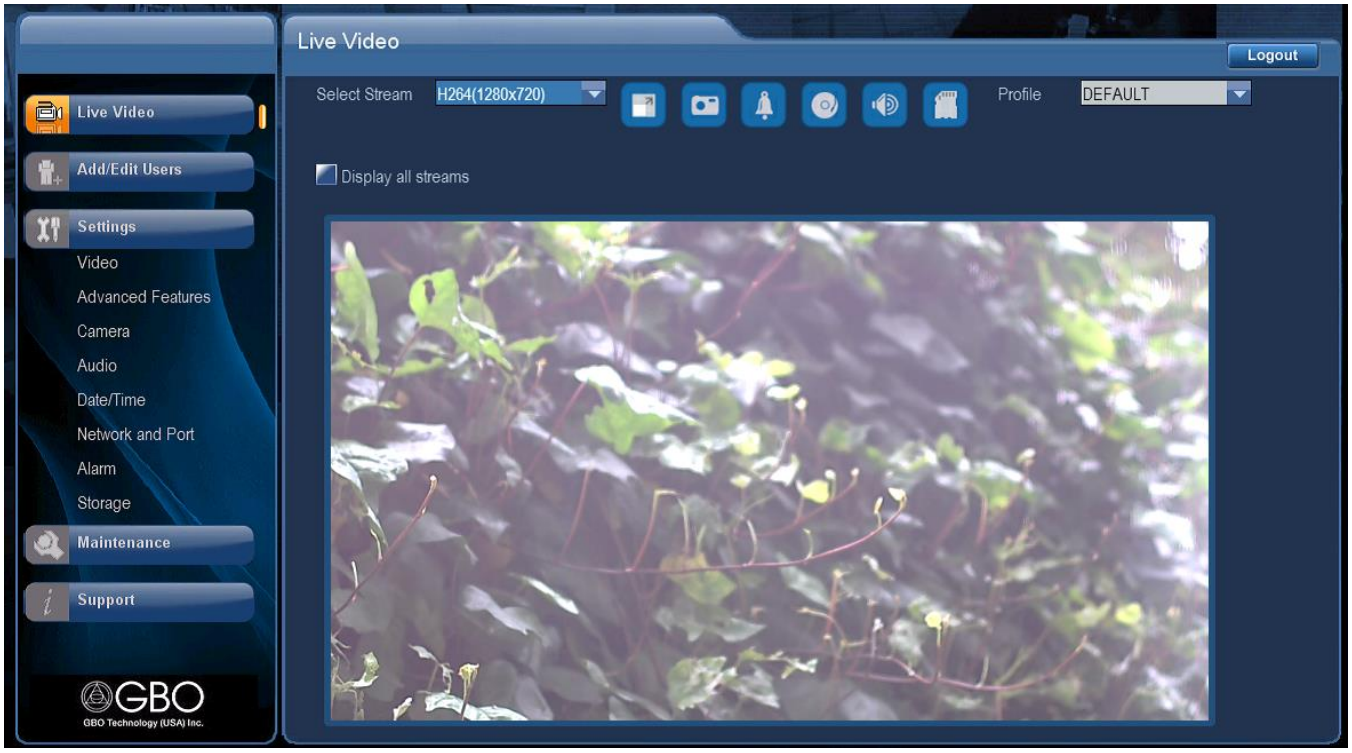


Figure 2.14 Web Browser GUI Screen (Live Video Screen)

CAUTION:

If your Browser screen size is not set to 100%, the bottom of some buttons may be cut off. Follow the instructions in **Step 10, Set Browser Size**, to set your Browser to the correct size.

Step 11 Set Browser Size

1. At the Internet Explorer screen, click on the **Settings** icon located in the upper right-hand corner of the screen.
2. Select **Zoom (100%)** from the drop-down menu, and then select **100%** from the second drop-down menu (see Figure 2.15). Your Browser window will now be the correct size.

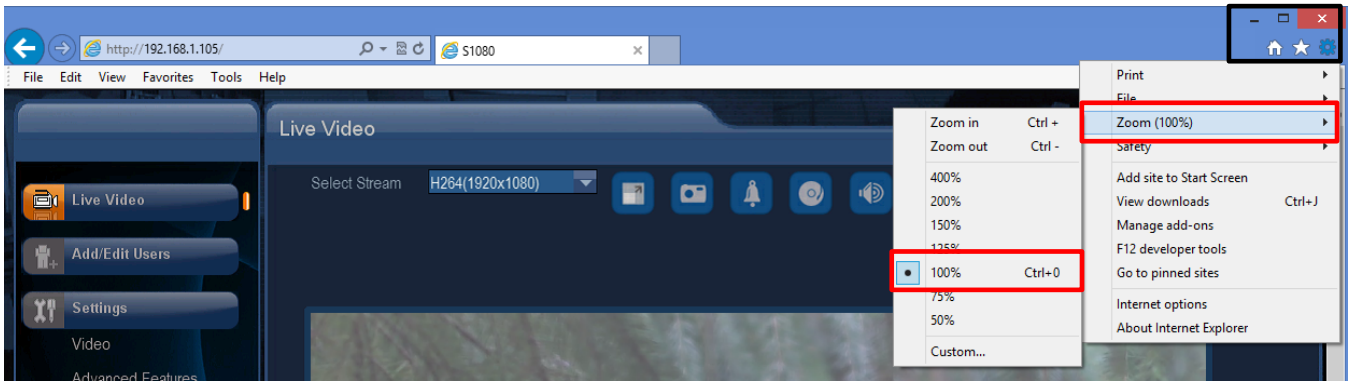


Figure 2.15 Set Browser Window Size

2.2 STANDALONE POE SWITCH INSTALLATION

This installation requires the camera and your PC to be connected to a standalone POE switch via two Ethernet cables. It uses the **OnVIF Device Manager** application to interface with the camera's software.

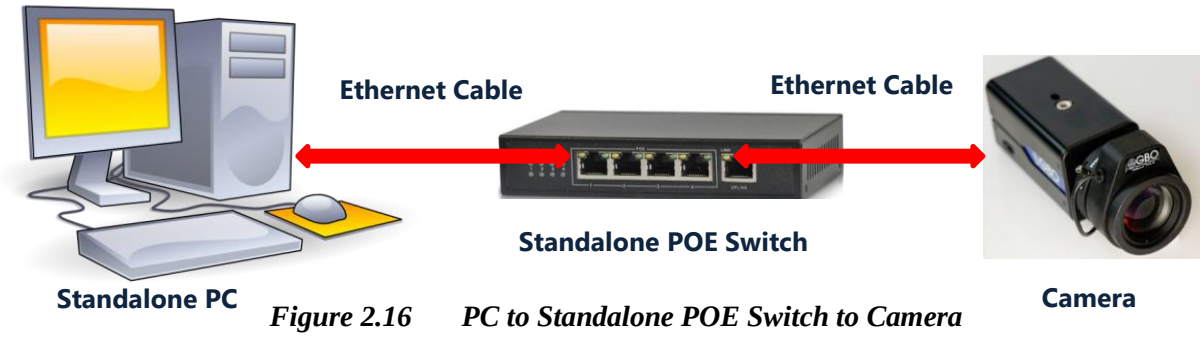


Figure 2.16 PC to Standalone POE Switch to Camera

Step 1 Connect PC to POE Switch

Using an Ethernet cable, connect one end to the POE switch and the other to your PC (see Figure 2.16).

Step 2 Power-On PC

First, power-on the PC, and second, ensure that the PC's Ethernet interface is configured to use DHCP to automatically obtain an IP address. In this case, because there is no DHCP server running on the network, the PC will obtain an Auto-IP address in the 169.254.0.0 class B subnet. See **Section 4.0, IP address Provisioning via DHCP**, for detailed information on required PC settings.

Step 3 Connect Camera to Standalone POE Switch

Using an Ethernet cable, connect one end of the cable to the LAN/POE slot in the back of the camera and the other end to the POE switch (see Figure 2.17). The POE switch provides DC power to the camera so that the camera's DC power cable is not needed.

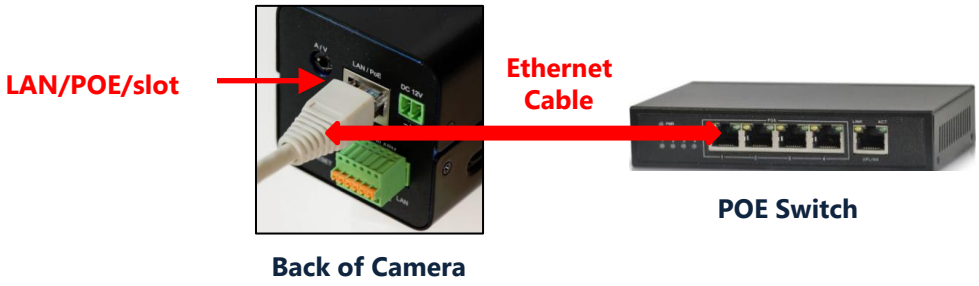


Figure 2.17 Back of Camera and POE Switch

Wait until the two camera LEDs light up. Initially they are red/orange in color; when they both turn green, the camera is "on" and working correctly (see Figure 2.4).

Step 4 Use "OnVIF Device Manager"

Follow **Steps 4-10** of **Section 2.1, Camera Connected Directly to a Personal Computer**.

2.3 UPNP- AND DHCP-ENABLED NETWORK INSTALLATION

The GBOT IP Network Camera is designed to be used on an IP network and needs an IP address. Most networks have a DHCP server that automatically assigns an IP address to a connected device.

Step 1 Connect Camera(s) to PC Using Ethernet Cable(s) and POE Switch

1. Using a standard Ethernet cable, connect the power-over-Ethernet (POE) switch to your PC (see Figure 2.18).
2. Using standard Ethernet cable(s) connect the POE switch to the camera(s) through the LAN/POE receptacle(s) located on the back of the camera(s) (see Figure 2.19).

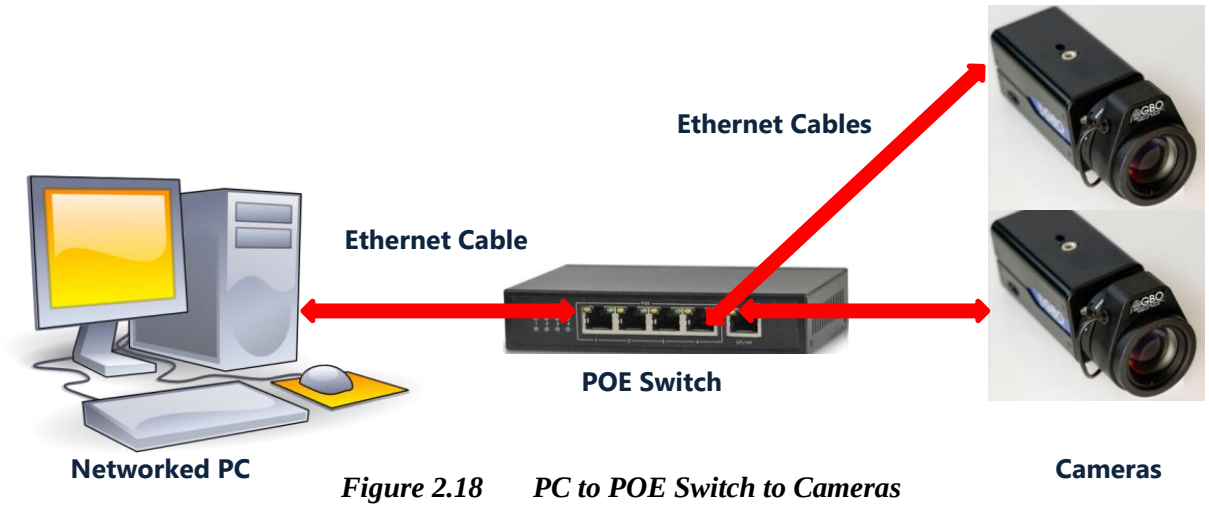


Figure 2.18 PC to POE Switch to Cameras

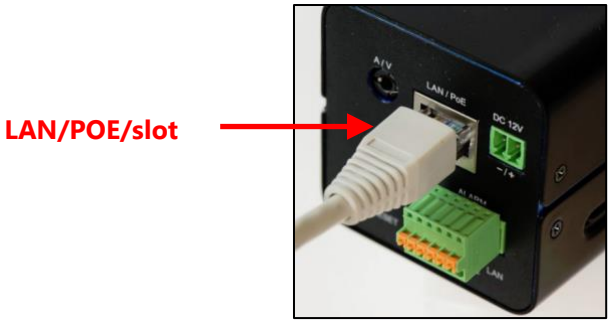


Figure 2.19 Ethernet Cable Inserted into Back of Camera

Step 2 Power On Camera Through POE

The camera is powered-up through the POE 802.3af-enabled network switch. (If POE support is **not** available, an external 12V DC power supply is required. See **Step 3, Power On Camera with DC Power Supply**, in **Section 2.1, Camera Connected Directly to a Personal Computer**.

Step 3 Starting the Web Browser GUI Using UPnP

By default, the GBOT S1080 IP Network Camera has the **User Plug and Play** (UPnP) functionality enabled. See that the **Enable UPNP** is checked in the **Network and Port Screen** (Figure 5.8). To start the **Web Browser GUI**, browse to the PC's **Network** dialog box. Under **Other Devices**, double-click the **GBOT_DD:EE:FF** icon, where **DD:EE:FF** represents the last three bytes of the camera's media access control (MAC) address.

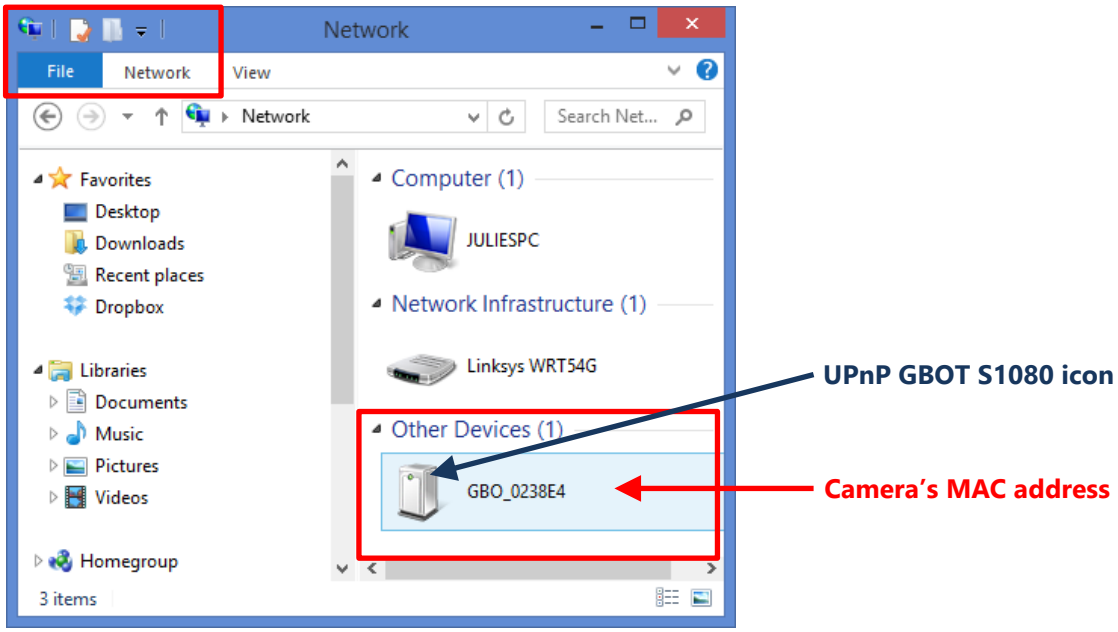


Figure 2.20 UPnP Icon for GBOT IP Network Camera

3. Internet Explorer needs the user's permission to run the camera **Web Browser GUI.** As the following three dialog boxes display, select first **Install** (see Figure 2.21), then select **Install** again (see Figure 2.22), and then **Allow** (see Figure 2.23), to proceed.

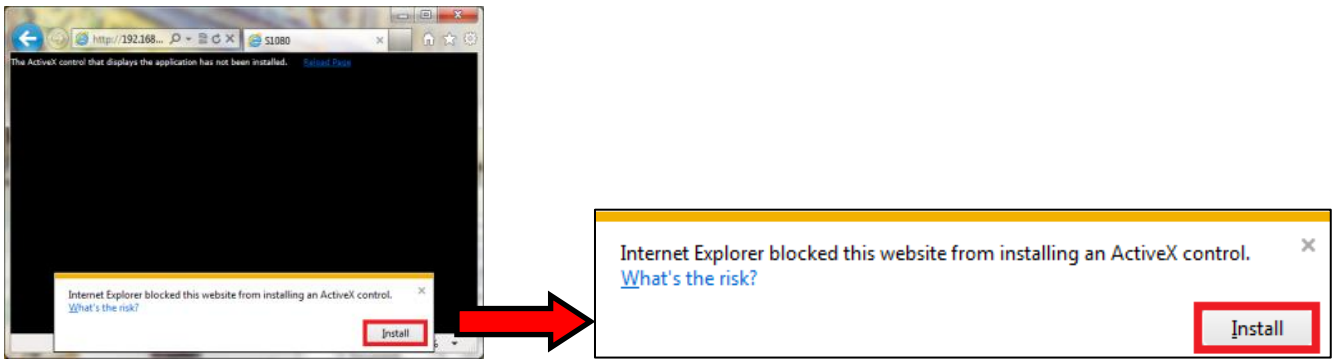

Internet Explorer blocked this website from installing an ActiveX control.
What's the risk?
Install
Internet Explorer blocked this website from installing an ActiveX control.
What's the risk?
Install

Figure 2.21 Permission Screen (1)

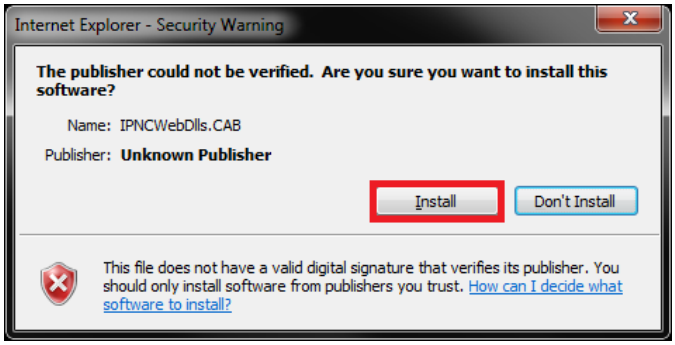

Internet Explorer - Security Warning
The publisher could not be verified. Are you sure you want to install this software?
Name: IPNCWebDlls.CAB
Publisher: Unknown Publisher
Install
Don't Install
This file does not have a valid digital signature that verifies its publisher. You should only install software from publishers you trust. How can I decide what software to install?

Figure 2.22 Permission Screen (2)

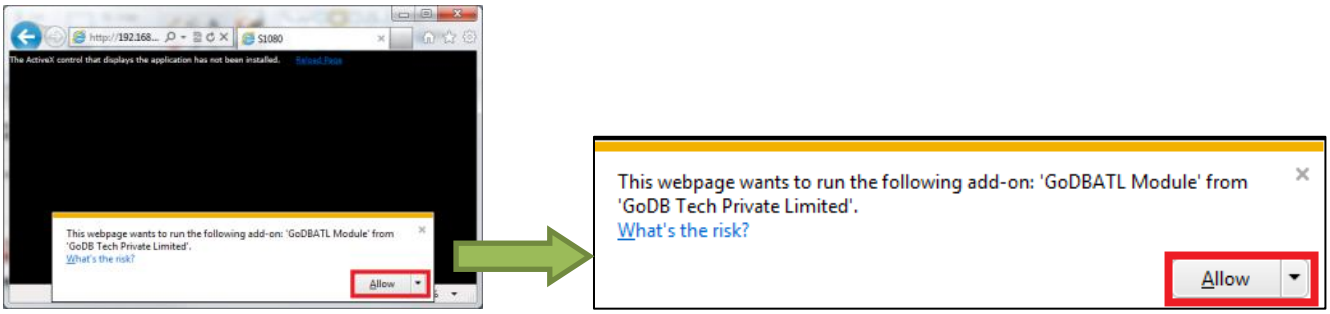


Figure 2.23 Permission Screen (3)

Step 4 Log In via Web Browser GUI

1. The **GBOT IP Network Camera Log In** screen displays when the connection to the GBOT S1080 IP Network Camera has been successful. Enter the **User Name** (**admin**) and **Password** (**9999**), and then click on the **Submit** button (see Figure 2.24).

Figure 2.24 GBOT IP Network Camera Log In Screen(2)

2. After successful installation and login, a live video from the camera starts streaming in the **Live Video** section of the **Web Browser GUI Screen**, which has two sections: (1) the **Live Video Section**, and (2) the **Navigation Panel**. At the top of the screen are control icons, drop-down lists, a , and the **Logout** button (see Figure 2.25).

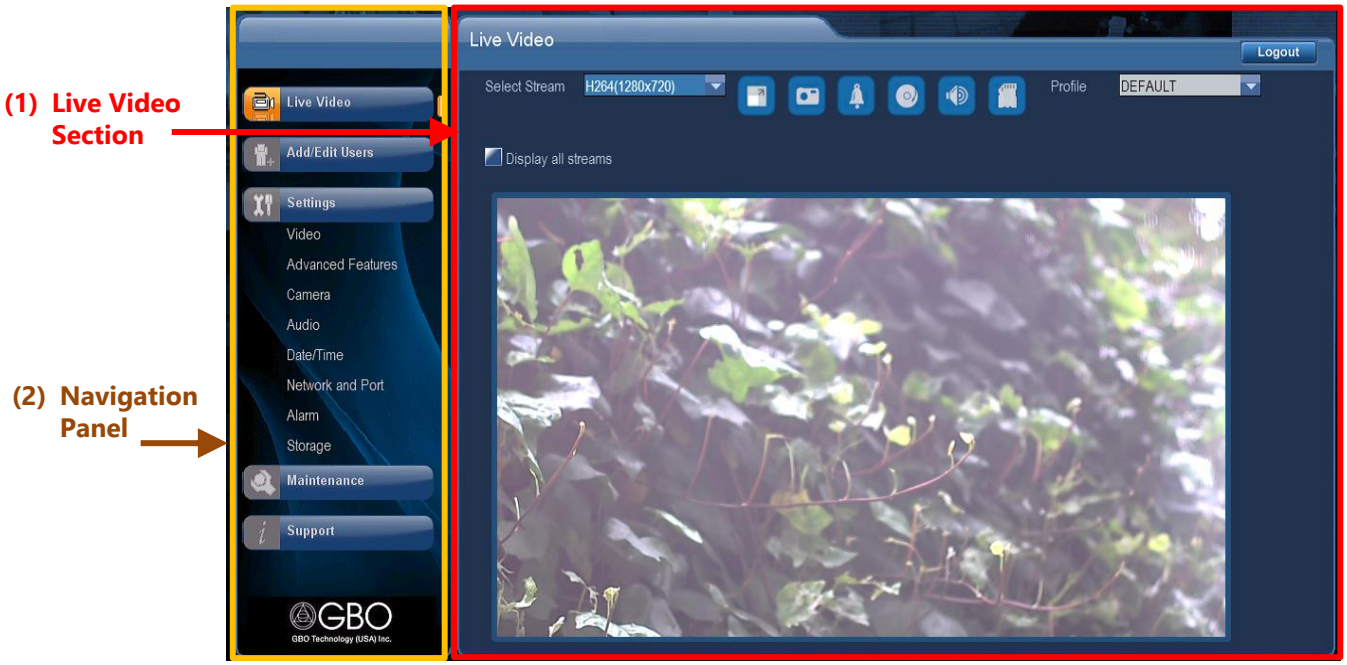


Figure 2.25 Web Browser GUI Screen (Live Video Screen 2)

3.0 CONFIGURE INTERNET EXPLORER AFTER FIRMWARE UPDATE

NOTE:

These steps need to be performed whenever the camera firmware is updated. It is assumed that a previous version of the camera firmware has been uploaded.

1. From **Internet Explorer** menu, select **Tools -> Manage add-ons**.

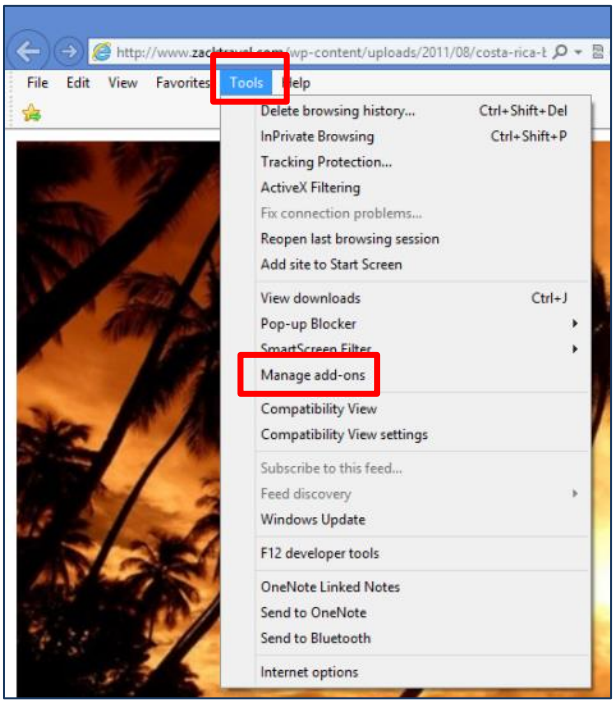


Figure 3.1 Internet Explorer Screen – Tools – Manage add-ons

2. When the **Manage add-ons Screen** opens, select **Currently loaded add-ons -> All add-ons**.

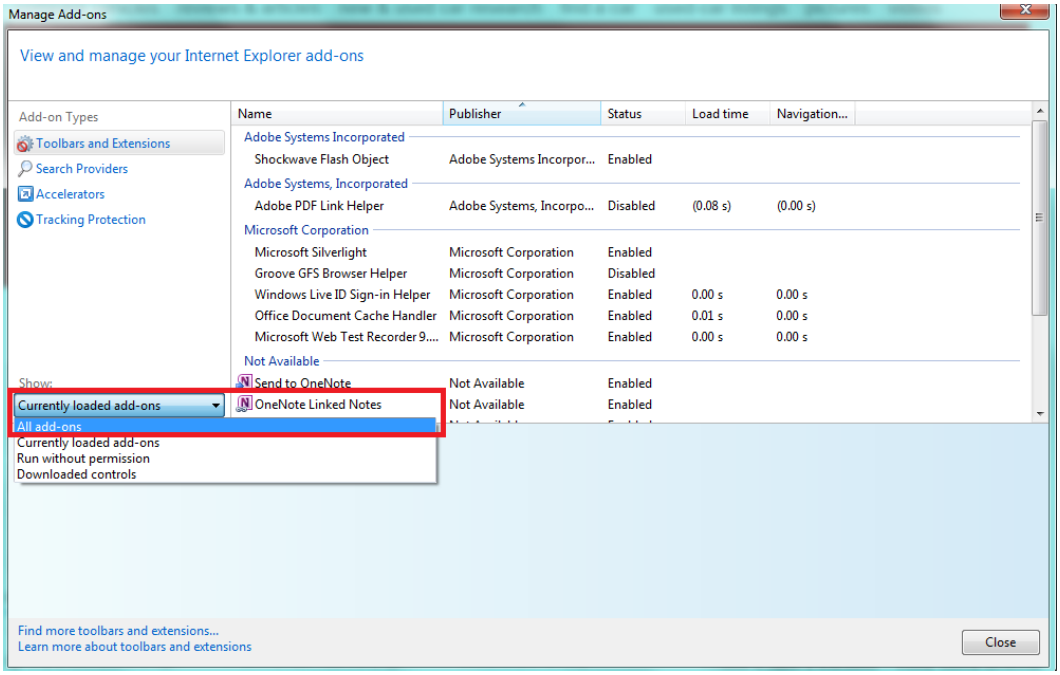


Figure 3.2 Manage Add-ons Screen

3. When the **Manage Add-ons Screen** opens, scroll to find **GoDB Class**, right-click on it, and then select **More Information** from the drop-down list.

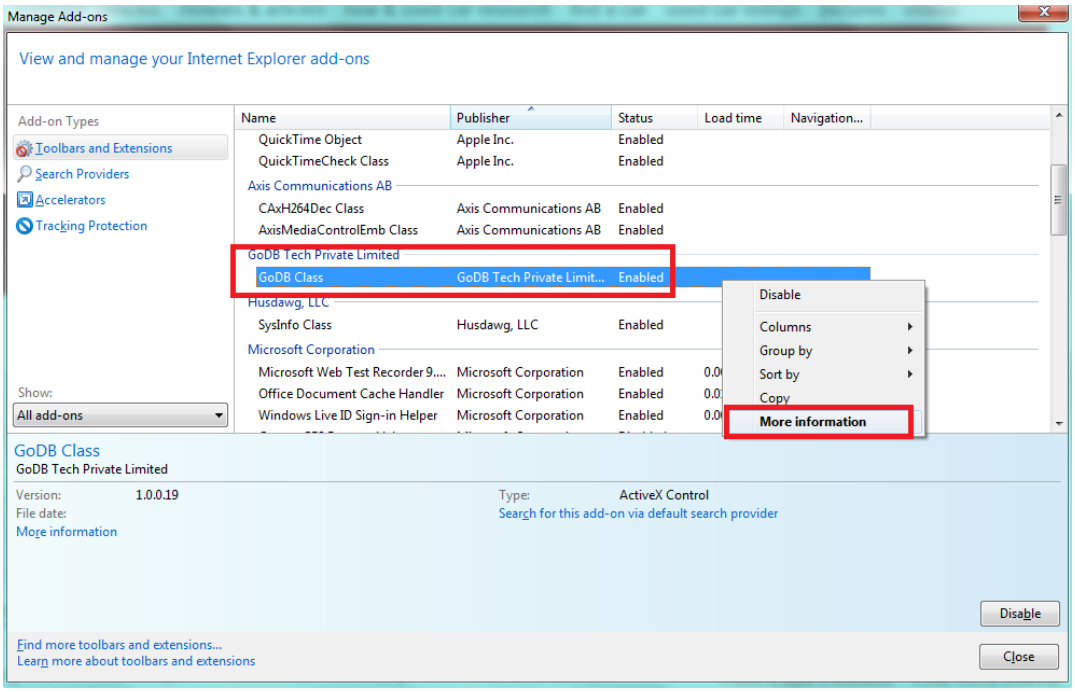


Figure 3.3 Manage Add-ons Screen (2)

4. When the **More Information Screen** opens, click on **Remove all sites,** click on **Remove,** and then click on **Close**.

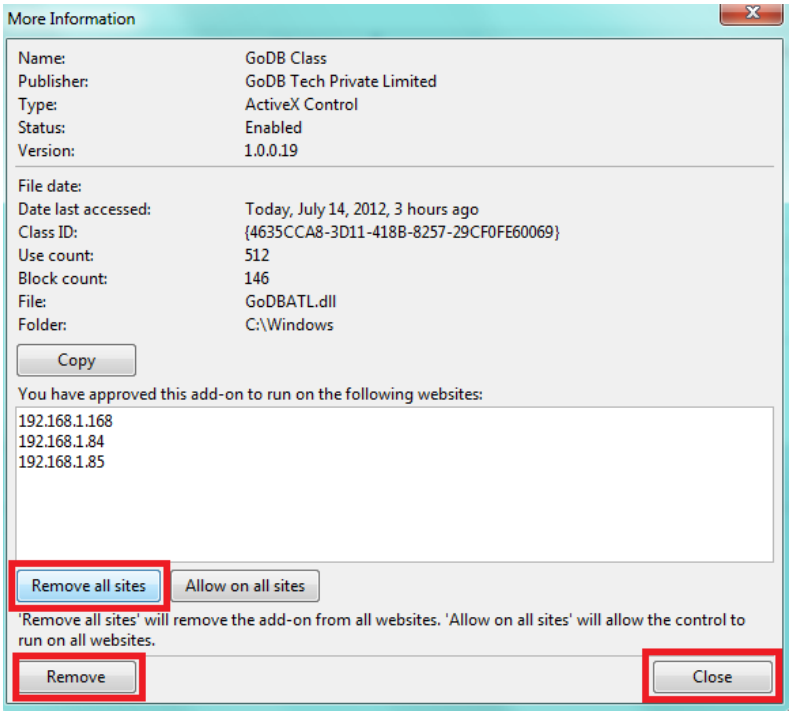


Figure 3.4 More Information Screen

5. Back at the **Manage Add-ons** Screen, scroll down to find **GFFMpeg Class**, right-click on it, and then select **More Information.**

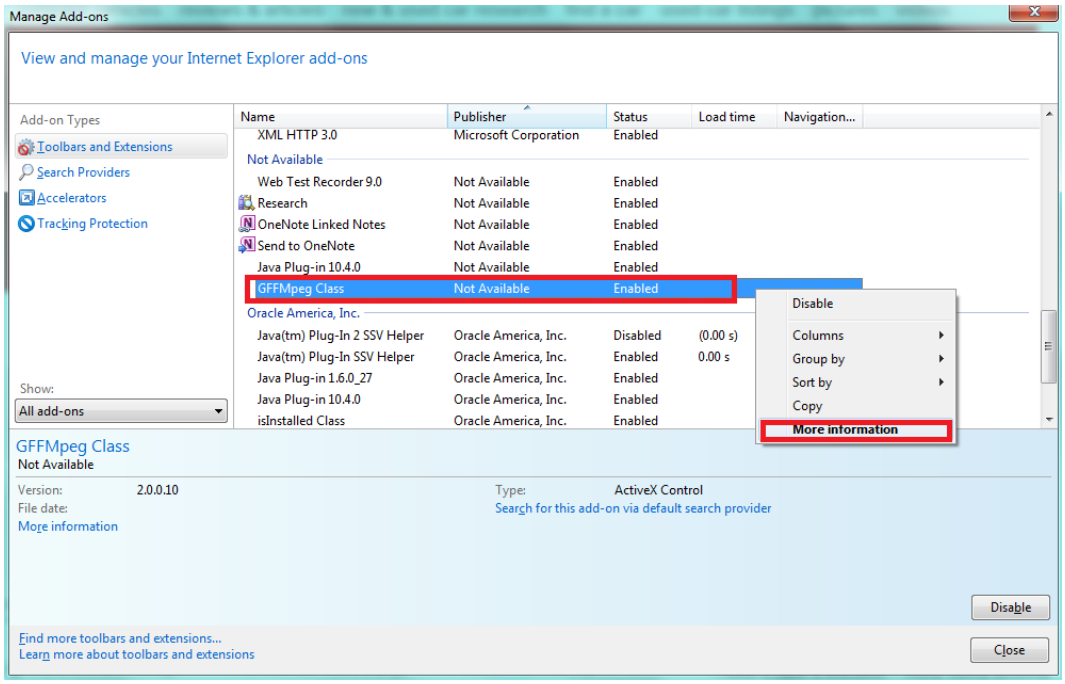


Figure 3.5 Manage Add-ons Screen (3)

6. At the **More Information Screen**, click on **Remove all sites,** click on **Remove**, and then click on **Close**.

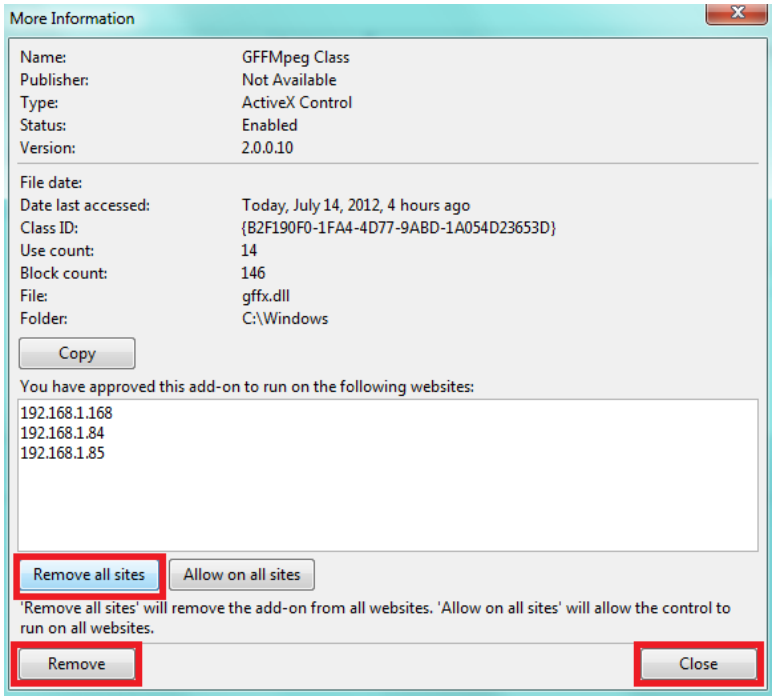


Figure 3.6 More Information (2)

7. Close **Internet Explorer** to complete the removal of the old version of the GBOT S1080 Web Browser GUI.

4.0 IP ADDRESS PROVISIONING VIA DHCP

The GBOT S1080 IP Network Camera uses DHCP to obtain its IP address automatically. Using DHCP allows the user to add more cameras with minimal or no manual configuration changes.

To verify that your computer Ethernet interface is configured to automatically obtain an IP address, follow the steps below.

1. On your desktop, right-click on the **Ethernet icon** and the **Network and Sharing Center** dialog box opens (see Figure 4.4). Go to step 3.

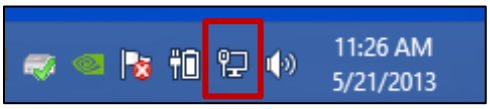


Figure 4.1 Ethernet Icon

2. Or, open your **Control Panel** and click first on **Network and Internet**, and when the **Network and Internet** dialog box opens, click on **Network Sharing Center**.

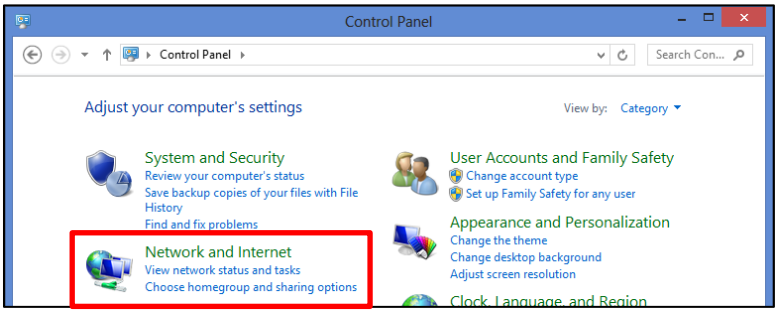


Figure 4.2 Control Panel Dialog Box

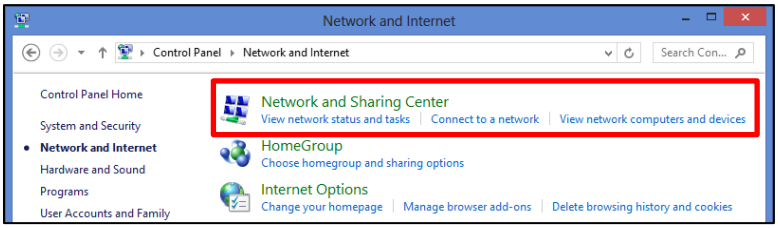


Figure 4.3 Network and Internet Dialog Box

3. When the **Network and Sharing Center** dialog box opens, click on **Change adapter settings, and** the **Network Connections** dialog box opens (see Figure 4.5).

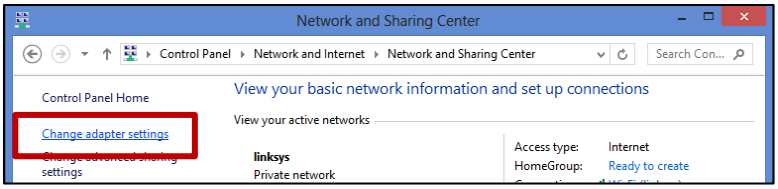


Figure 4.4 Network and Sharing Center Dialog Box

4. Right-click first on **Ethernet**, and then on **Properties**. The **Ethernet Properties** dialog box opens.

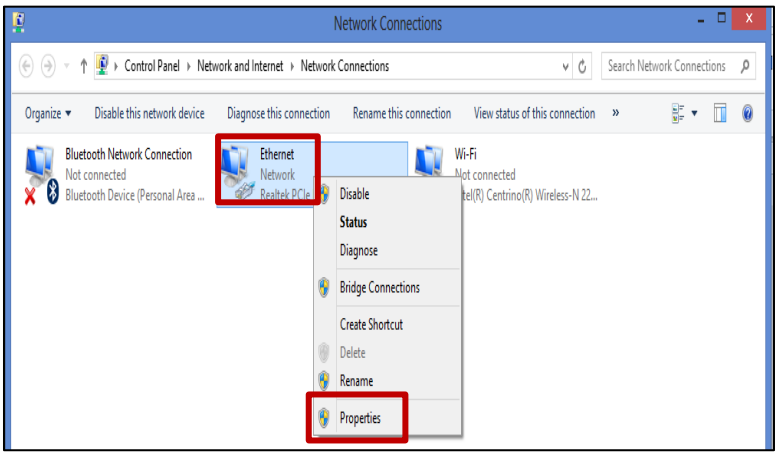


Figure 4.5 Network Connections Dialog Box

5. Scroll down and double-click on **Internet Protocol Version 4 (TCP/IPv4)**, and the **Internet Protocol Version 4 (TCP/IPv4) Properties** dialog box opens.

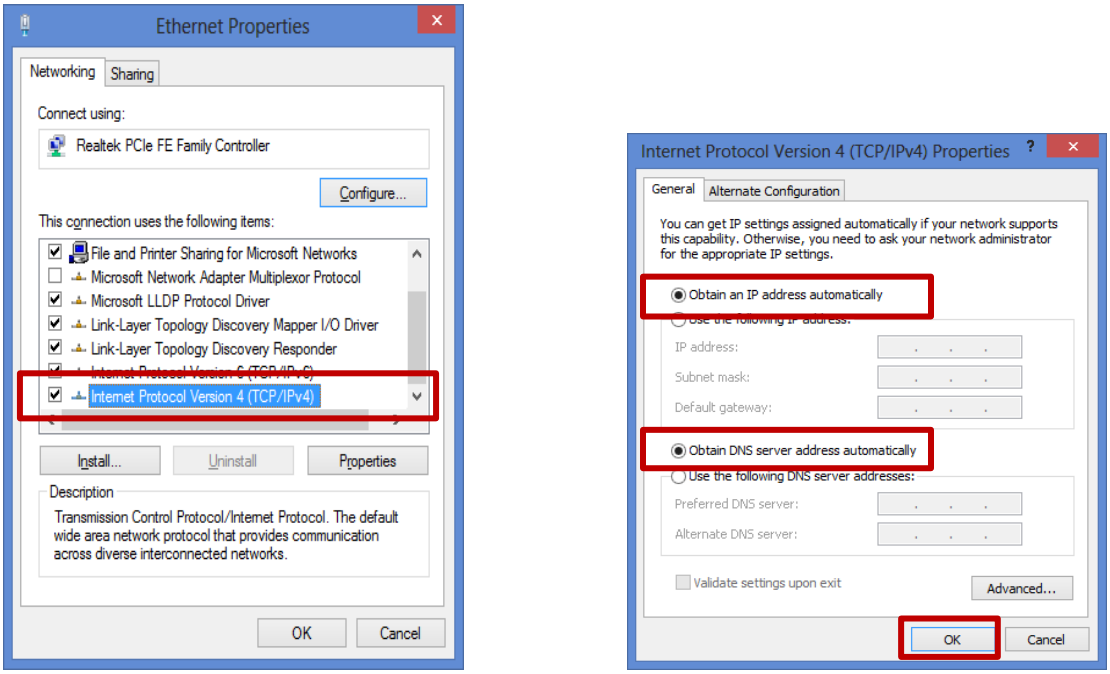


Figure 4.6 Ethernet Properties and Internet Protocol Dialog Boxes

6. Ensure that both **Obtain an IP address automatically** and **Obtain DNS server address automatically** radio buttons are checked.

7. Click on the **OK** button to close the dialog box.

5.0 STATIC IP ADDRESS PROVISIONING (PC SIDE)

5.1 MANUALLY CONFIGURE IP ADDRESS

If DHCP support is not available, the GBOT S1080 IP Network Camera can be manually configured to use a static IP address.

1. Follow **Steps 1-5** described in **Section 4.0, IP address Provisioning via DHCP.**
2. At the **Internet Protocol Version 4 (TCP/IPv4) Propertie**s dialog box, de-select the **Obtain an IP address automatically** radio button and select **Use the following IP address** radio button.

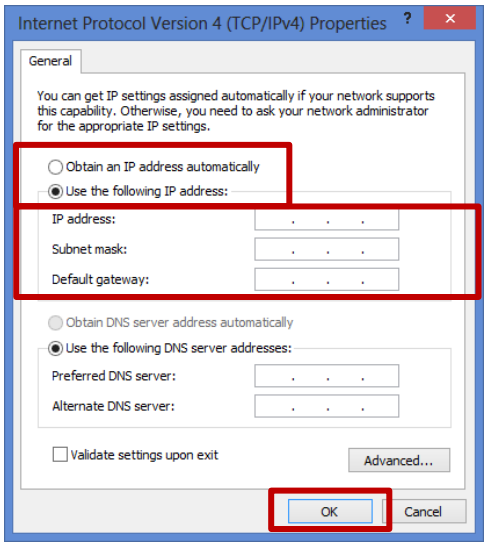

Internet Protocol Version 4 (TCP/IPv4) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address:
Subnet mask:
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Validate settings upon exit
Advanced...
OK
Cancel

Figure 5.1 Internet Protocol Version 4 (TCP/IPv4) Properties Dialog Box (2)

3. Obtain information from your local IT personnel to complete the **IP address**, **Subnet mask**, and **Default gateway** fields.
4. After entering this information, click on the **OK** button to save the changes and close the dialog box.

5.2 VIEW IP ADDRESS SETTING VIA *USBCONF* UTILITY

Another way to view the IP address is to use ***USBconf* Utility**. To use this utility, connect the GBOT S1080 IP Network Camera to the PC being used via a USB-to-Mini A cable. Follow the steps below.

1. Using a USB to Mini-A cable, insert the Mini-A end of the cable into the receptacle located on the back panel of the camera (see Figure 5.3).

Figure 5.2 Connect PC to GBOT IP Network Camera with Mini-A-to-USB Cable

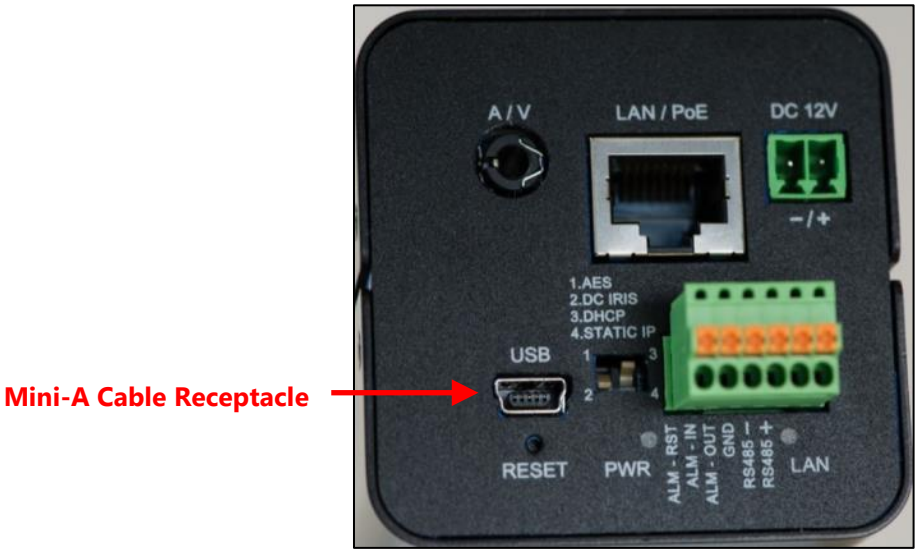


Figure 5.3 Mini-A Cable Receptacle on Camera Back Panel

2. Connect the universal serial bus (USB) end of the cable to the PC.
3. Allow a short time for the PC to detect the new USB storage device from the GBOT S1080 IP Network Camera; the **AutoPlay** dialog box opens.

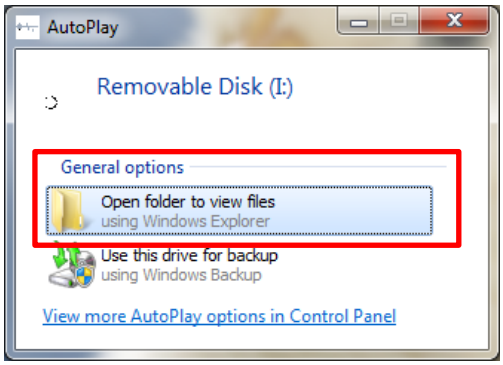


Figure 5.4 AutPlay Dialog Box

4. Click on **Open folder to view files** and the folder opens.

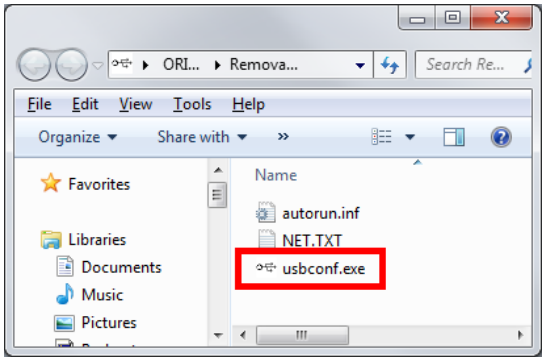


Figure 5.5 Starting USBconfi Utility to Set IP Address

5. Click on ***usbconf.exe*** to open the folder and start ***usbconf.exe***. A screen opens showing detailed network settings.

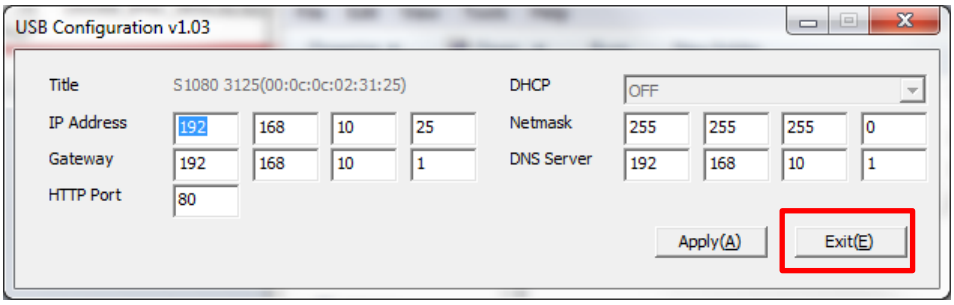


Figure 5.6 Detailed Network Settings

6. Enter the desired network configuration information, including the IP address.
7. Click the **Exit(E)** button to quit the ***USBconf* Utility** and disconnect the USB cable.
8. The settings will not take effect until the USB cable is detached from the camera. When the LAN LED changes color from **red** to **orange**, and then to **green**, the network connection is ready.

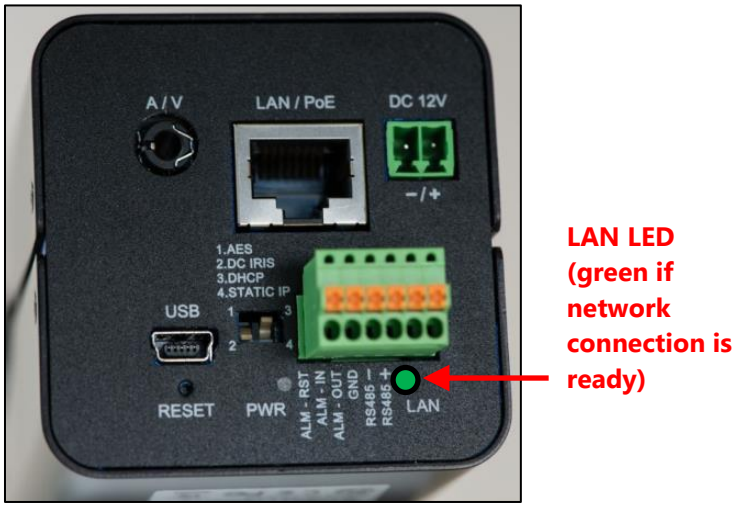


Figure 5.7 Location of LAN LED on Camera Back

5.3 Set Static IP Address via Web Browser GUI (Camera Side)

NOTE:

The Web Browser GUI must first be set up before this procedure can performed. See **Section 2.3, UPNP- and DHCP-Enabled Network** Installation**, Step 3, Starting the Web Browser GUI Using UPnP**, for more detailed information.

The camera's static IP address can be changed via the Web Browser GUI. Follow the steps below.

1. Obtain the existing IP address using one of the three methods:
   a. Documentation from prior configuration.
   b. Factory default. Refer to **Section 1.2, Reset Factory Default Values** for details of how to reset the camera.
   c. *USBconf* utility. Refer to **Section 5.2**, **View IP Address Setting via *USBconf* Utility**, for details on how to obtain current settings.
2. Ensure that the PC is in the same subnet and open the camera **Web Browser GUI screen (see Section 5.1,** Manually Configure IP Address**).**
3. At the **Web Browser GUI Screen** (see Figure 2.25), select **Settings → Network and Port** and go to the **Network** tab.
4. Enter the desired **IP address**, **Netmask, Default Gateway**, and **DNS Server** in their respective fields.

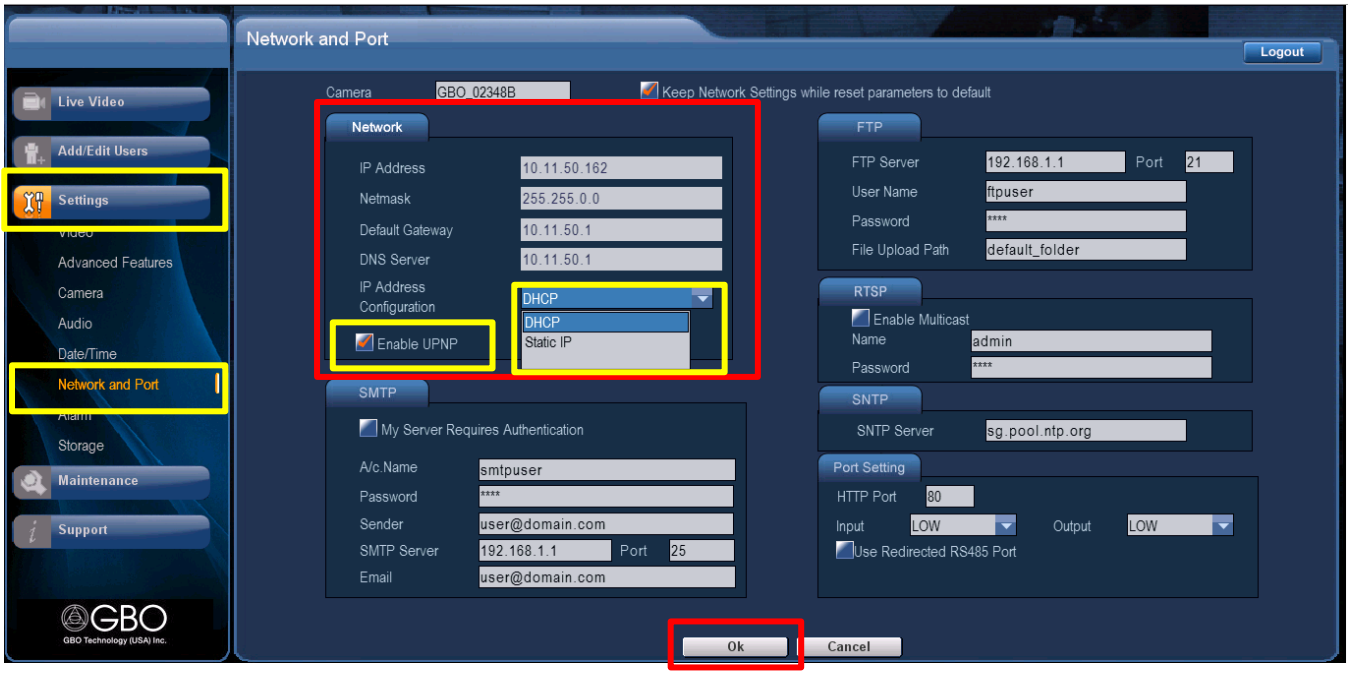


Figure 5.8 Network and Port Screen

5. Select **Static IP** from the **IP Address Configuration** drop-down list.

5. Click on the **Ok** button and wait for the confirmation **Message** dialog box (approximately 60 seconds). When the LAN LED changes color from **red** to **orange**, and then to **green**, the network connection is ready.

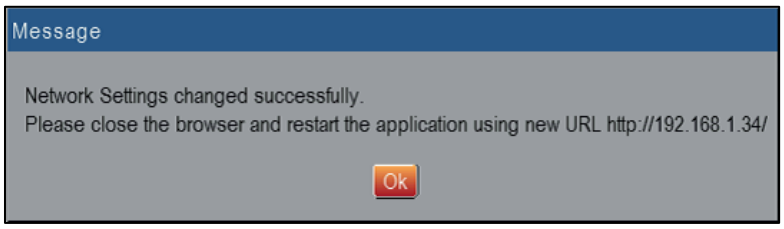

Message
Network Settings changed successfully.
Please close the browser and restart the application using new URL http://192.168.1.34/
Ok

Figure 5.9 Network Settings Change Confirmation

6. Close Internet Explorer and follow the steps listed in **Section 2.3, UPNP- and DHCP-Enabled Network** Installation**, Step 3, Starting the Web Browser GUI Using UPnP,** to re-connect using the new IP address.

6.0 WEB BROWSER GUI SCREEN

The **Web Browser GUI Screen** or **Live Video Screen**, has two sections: (1) the **Live Video Section**, and (2) the **Navigation Panel**. At the top of the screen are control icons, drop-down lists, and the **Logout** button, that are described in the sections below.

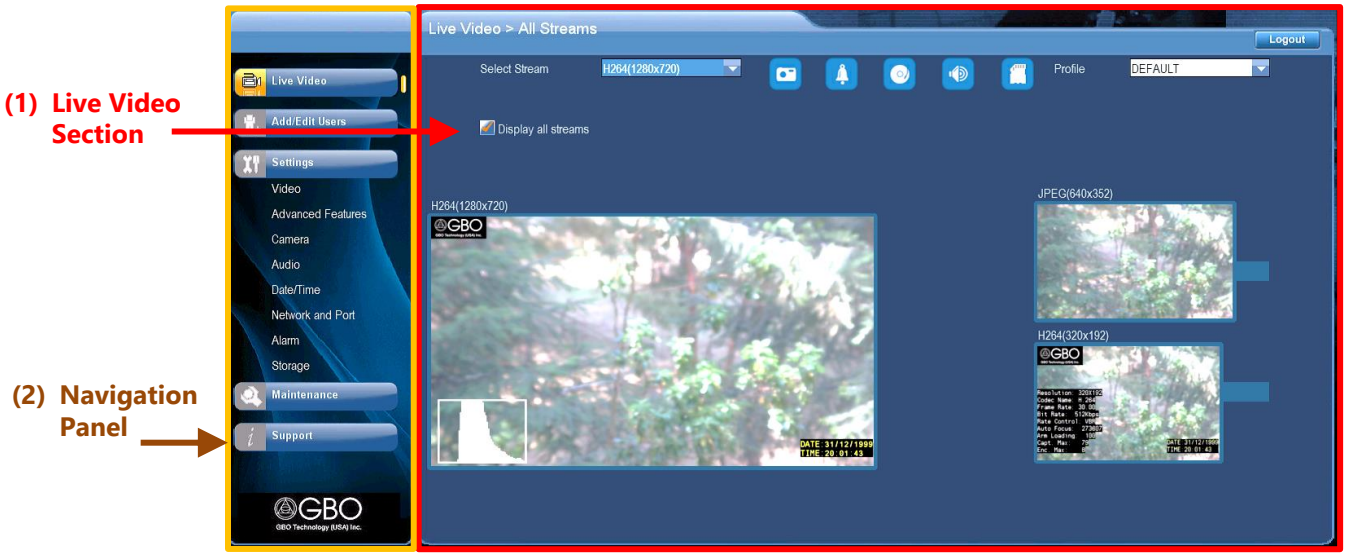


Figure 6.1 Web Browser GUI Screen (Live Video Screen)

6.1 LIVE VIDEO STREAMING SCREEN

At the top of the **Live Video Streaming Screen** are the icons, drop-down lists, checkbox, and **Logout** button (see Figure 6.2).

Figure 6.2 Live Video Screen Controls

6.1.1 Select Stream Drop-Down List

From the **Select Stream** drop-down list, select either the live stream (H264x720) or a JPEG (Joint Photographic Experts Group) version of the stream (see Figure 6.1).

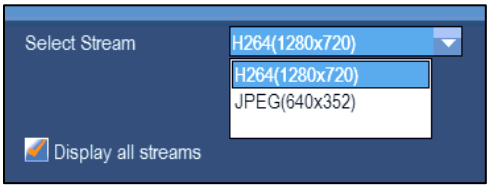


Figure 6.3 Select Stream Drop-Down List

6.1.2 Display all Streams Checkbox

To view any, or all, of the three available video streams in the same view, click on the **Display all streams** checkbox. This must be enabled at the **Settings → Video → Stream Type** screen before it is available to the user.

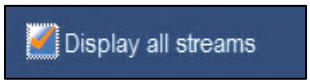


Figure 6.4 Display All Streams Checkbox– Enabled

6.1.3 Enable Display all streams

To enable this checkbox, at the **Live Video Screen,** click on **Settings →Video** and when the **Video Screen** opens, select **Single, Dual, or Tri-Stream** from the **StreamType** drop-down list (see Figure 6.5).

Figure 6.5 Settings→Video→StreamType

6.1.3.1 SAVE CHANGES

Click the **Ok** button at the **Video Screen** to save any changes. The message, "Updating . . .," displays in the video window. The **Ok** button changes color to red to give the user a visual notification that the changes are being saved, and changes color back to silver when the changes have taken effect (see Figure 6.6 and Figure 6.7).

Figure 6.6 Updating Message

When the change is complete, a message displays at the bottom of the screen to notify the user.

Figure 6.7 Video Setting Saved Message

NOTE:

Making this change automatically disables the **1X Display** icon (see Figure 6.10).

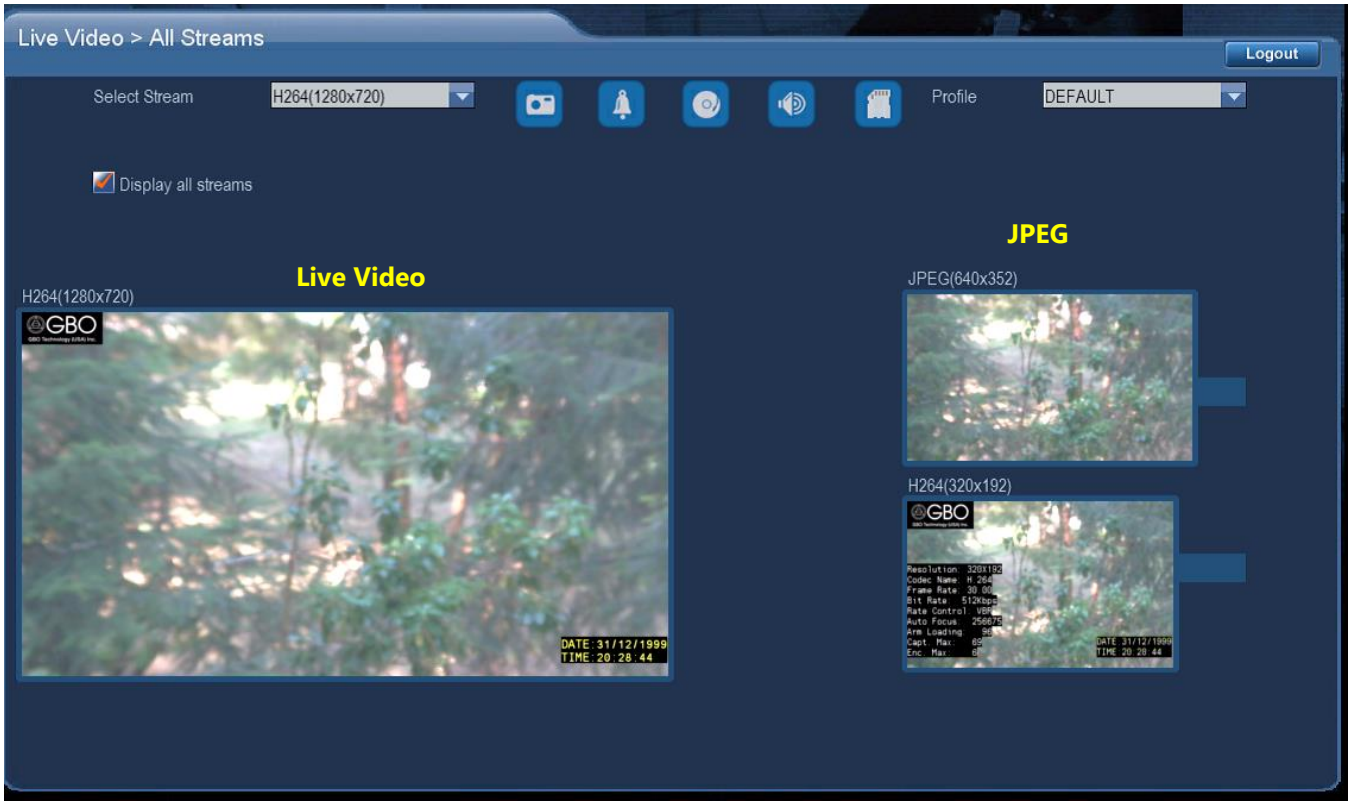


Figure 6.8 Live Video > All Streams Screen

6.1.4 Icons

These icons allow the user to:

- expand the size of the streaming video screen
- make a snapshot of the live video stream
- set recording choices
- toggle the audio at the camera location
- set the alarm
- play a warning
- view files on the SD card (if installed in the camera)

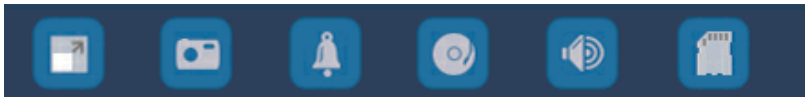


Figure 6.9 Icons

6.1.4.1 1X DISPLAY ICON

Figure 6.10 1X Display Icon

1. Click on the **1X Display** icon to expand the streaming video to the whole screen. A scroll bar allows the user to move up and down the screen.
2. Click on the **Close 1X Mode** icon to revert to the **Live Video Screen**.

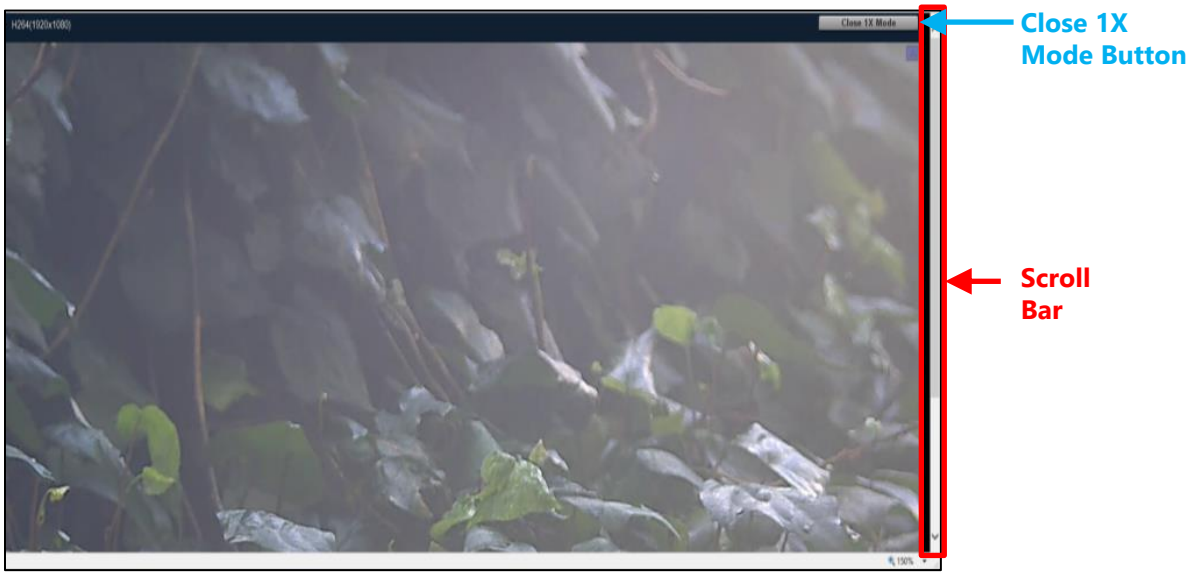


Figure 6.11 Expanded Live Video Streaming Screen

Figure 6.12 Close 1X Mode Button

6.1.4.2 SNAPSHOT ICON

1. Click on the **Snapshot** icon to capture and store the first resolution JPEG image of whatever the camera is "seeing" right now. The **File information** screen opens (see Figure 6.14).

Figure 6.13 Snapshot Icon

2. Enter the **File Name** in the field, select **SD/MMC**, **USB**, or **NAND** radio button to **Save to**, depending on the desired format. The radio button blinks to notify the user that the change has not yet been saved. Click on the **Ok** button to save the format type.

Figure 6.14 File Information Screen

6.1.4.3 ALARM STATUS ICON

The **Alarm Status** icon has to be enabled at the **Settings →Alarm** screen. Also, an alarm trigger must be selected, i.e., **Motion Detected**, **Ethernet Lost**, or **Audio Alarm**. See Section 17.0 and Figure 6.15 for more information about the alarm settings.

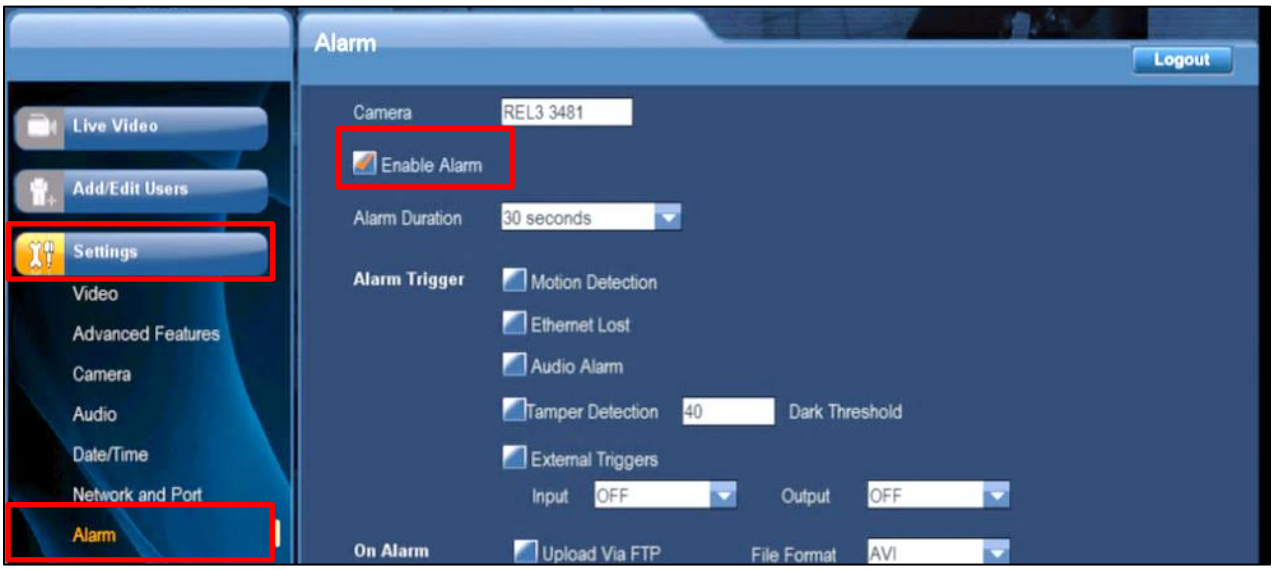


Figure 6.15 Settings –Enable Alarm Screen

When any of the preset conditions are met, the alarm is triggered and the alarm icon changes from inactive to activate. The alarm icon changes color from white to orange to give the user a visual signal that the alarm state has changed.

Figure 6.16 Alarm Status Icon – Alarm Inactivated and Alarm Activated

6.1.4.4 RECORD STATUS ICON

The **Record Status** icon indicates whether the camera is actively recording, or if it is in an inactive state. Recording may be initiated for a specified period of time or for whenever an alarm is triggered. The conditions can be set at the **Settings →Alarm** or **Settings →Storage** screens. For more detailed information, see **Section 17.5, On Alarm**.

When recording, the icon changes color from white to orange to give the user a visual signal that the recording state has changed.

Figure 6.17 Record Status Icon – Inactive State to Active State

6.1.4.5 AUDIO TOGGLE ICON

Press the **Audio** icon to toggle the sound at the camera location from **OFF** to **ON**. A pre-selected **Warning** signal may be initiated. The conditions are set at the **Settings → Audio** screen. For more detailed information, see **Section 14.1, Enable Audio.**

When audio is on, the icon changes color from white to **orange** to give the user a visual signal that the audio state has changed.

Figure 6.18 Audio Icon – Toggle OFF to ON

6.1.4.6 SD CARD EXPLORER ICON

This icon is only available if an SD card has been previously inserted into the SD receptacle in the camera. Otherwise, it is missing. Refer to **Section 19.0, SD CARD Explorer Screen**, for detailed information about the SD Card files.

Figure 6.19 SD Card Explorer Icon

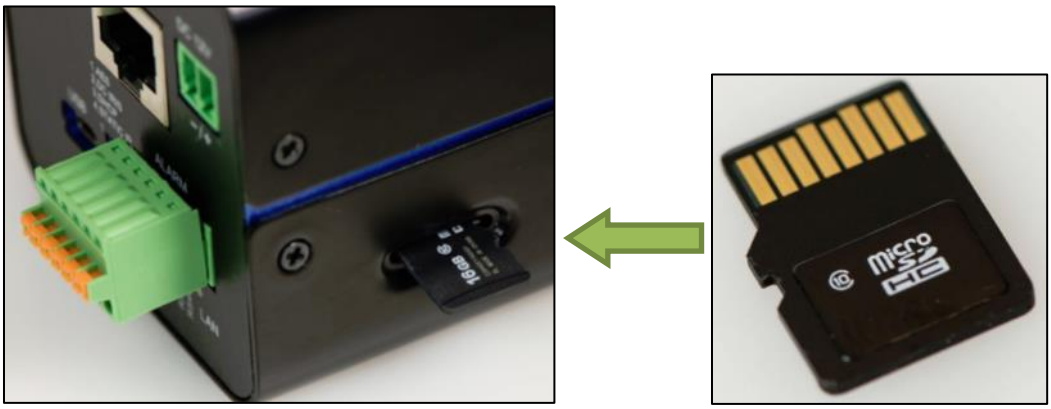


Figure 6.20 SD Card and SD Card Inserted into Camera Receptacle

6.1.4.7 PROFILE

The **Profile Drop-down List** allows the user to select the default camera or a previously created profile they have created and named and want to return to. The profile name will be listed. Click on it to reset to these pre-selected settings.

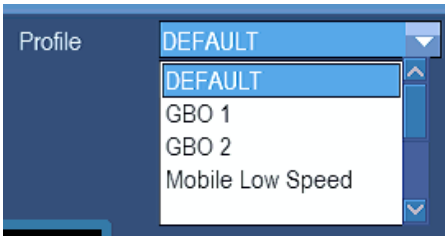


Figure 6.21 Profile Drop-down List

6.1.5 Logout Button

Click on the **Logout** button to close the **Web Browser GUI** (**Live Video) Screen.**

6.2 NAVIGATION PANEL

The **Navigation Panel** for the S1080 IP Network Camera is located on the left-hand side of the **Live Video Screen**. The button functions are described in detail in subsequent paragraphs.

7.0 ADD/EDIT USERS

At this screen, new user information may be entered or current information may be modified. Select the **Add/Edit Users** button and the **Add/Edit User Screen** displays. The fields, drop-down lists, and radio buttons on this screen are described in the sections below.

7.1 CHANGE PASSWORD

You may wish to change your password as soon as possible since the default password is the same for For example, you may want to add Admin 1, Admin 2,etc.

1. At the **Web Browser GUI Screen** (see Figure 6.1), click on **Add/Edit Users** and the **Add/Edit Users Screen** opens.

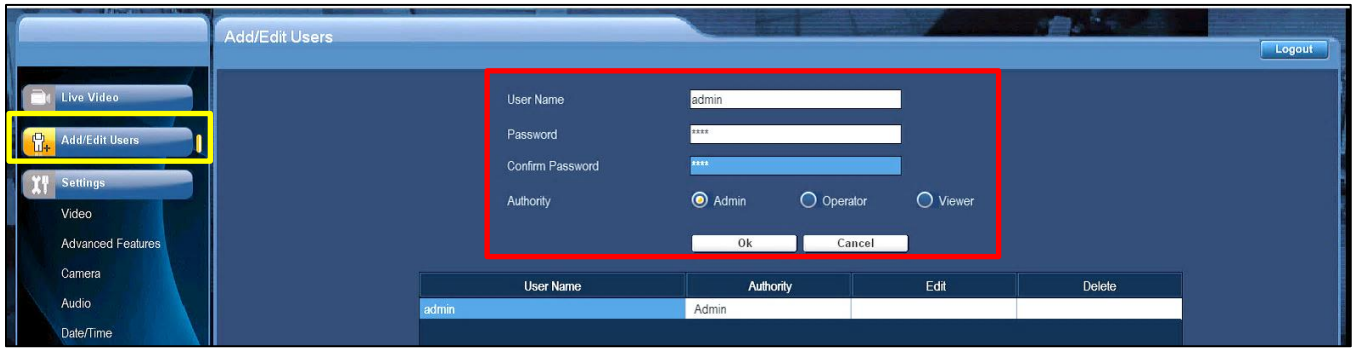


Figure 7.1 Add/Edit Users Screen

2. Enter a **User Name** and **Password**. Enter the password again in the **Confirm Password** field. Click on the **Admin** radio button for **Authority**.
3. Click on the **Ok** button and a **Message** dialog box opens asking, "User already exists. Do you want to replace?"
4. Click on the **Yes** button and wait for the change to take effect.

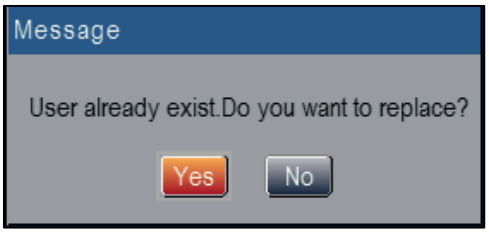


Figure 7.2 Message Dialog Box

7.2 USER INFORMATION

Table 7-1 Add/Edit User Information

New/Modified User Information	
User Name:	Enter the user name to add/modify
Password:	Enter the password to change the existing data
Confirm Password:	Re-enter the same user password that was entered in the Password field
Authority:	➢ **Admin:** Has permission for all operations in Web interface. Also, can add or delete any user's account. ➢ **Operator:** Has permission for all operations in Web interface except User Add/Delete. ➢ **Viewer:** Has permission to monitor the Web interface, but cannot use any function, or set any parameters.

The user information displayed in the **Add/Edit Users Screen** may be edited or deleted. After entering any new information, click the **Ok** button for the change(s) to take effect.

A message displays with the name of the new user. Click on the Message dialog's **Ok** button, and the name is added to the list.

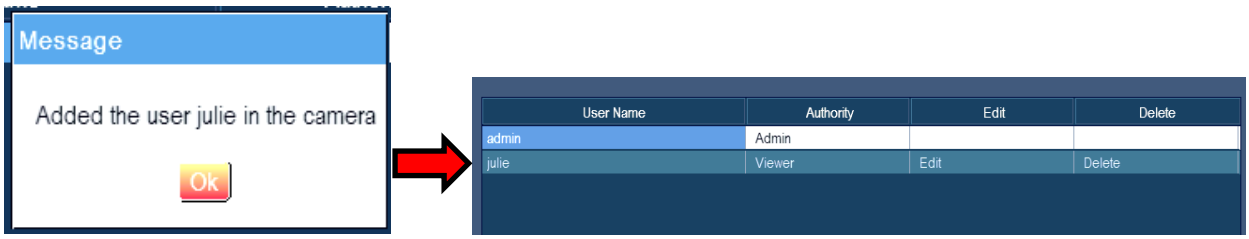


Figure 7.3 User Information Chart- New User Added

NOTES:

1. Admin is the default account and cannot be deleted.
2. Maximum of 16 accounts can be created.
3. Maximum length of username is limited to 32 characters.
4. Maximum length of password is limited to 16 characters with a minimum of 4 characters.

7.3 EDIT/DELETE USER

Select the user's name in the **Edit** column to change User Name/ Password/Authority.

Click on the **Ok** button to save any changes made in the **User Information Chart**.

7.4 ACCESS CONTROL SETTINGS

The **Access Control Settings Table,** below, lists which features/settings/windows are enabled for each **Authority** granted to each user.

Table 7-2 Access Control Settings

Feature	Authority		
	Admin	Operator	Viewer
Live Video (Main Screen)	Yes	Yes	Yes
Video/Image Settings	Yes	Yes	No
Advanced Features Settings	Yes	Yes	No
Camera Settings	Yes	Yes	No
Audio Settings	Yes	Yes	No
Date/Time Settings	Yes	Yes	No
Network & Port Settings	Yes	Yes	No
Alarm Settings	Yes	Yes	No
Storage Settings	Yes	Yes	No
User Settings	Yes	No	No
Maintenance	Yes	Yes	No
Support	Yes	Yes	No
SD Card Explorer	Yes	Yes	No
Example Modes	Yes	Yes	Yes

8.0 VIDEO IMAGE SETTINGS

8.1 PLAYBACK LATENCY

The selections made at the **Video Screen** determine how you view and control the video stream. An important factor in determining these settings is playback latency. Playback latency is the length of time between when the camera sends video data and when you see it on the **Live Video Screen**. The length of time depends on the power of your CPU/GPU and the quality of the throughput reliability and the jitter of the network transport, and the settings you make at the **Video Screen** regarding H.264 encoding.

To reduce playback latency on a less powerful computer, consider reducing the resolution, frame rate, and bit rate, setting the **Codec Combo** to **H.264,** setting the **Stream Type** to **Single**, and the **H.264 profile** to **Base**. **Base** is the least CPU intensive setting, while **High** is the most CPU intensive setting.

The bit rate is the rate at which bits are transferred from one location to another. In other words, it measures how much data is transmitted in a given amount of time. A higher bit rate gives a better quality image. Bit rate is commonly measured in bits per second (bps), kilobits per second (Kbps), or megabits per second (Mbps).

The frame rate is the number of frames or images that are transmitted over the network.

Resolution is image quality and is measured in megapixels. Pixels are the tiny light capturing elements on the camera's sensor. The higher the number of pixels (or megapixels), the higher is the resolution of the camera.

8.2 VIDEO SCREEN SETTINGS

Select the **Settings** button and then select **Video**, and the **Video** screen displays. The fields, drop-down lists, buttons, and checkboxes on this screen are described in the sections below.

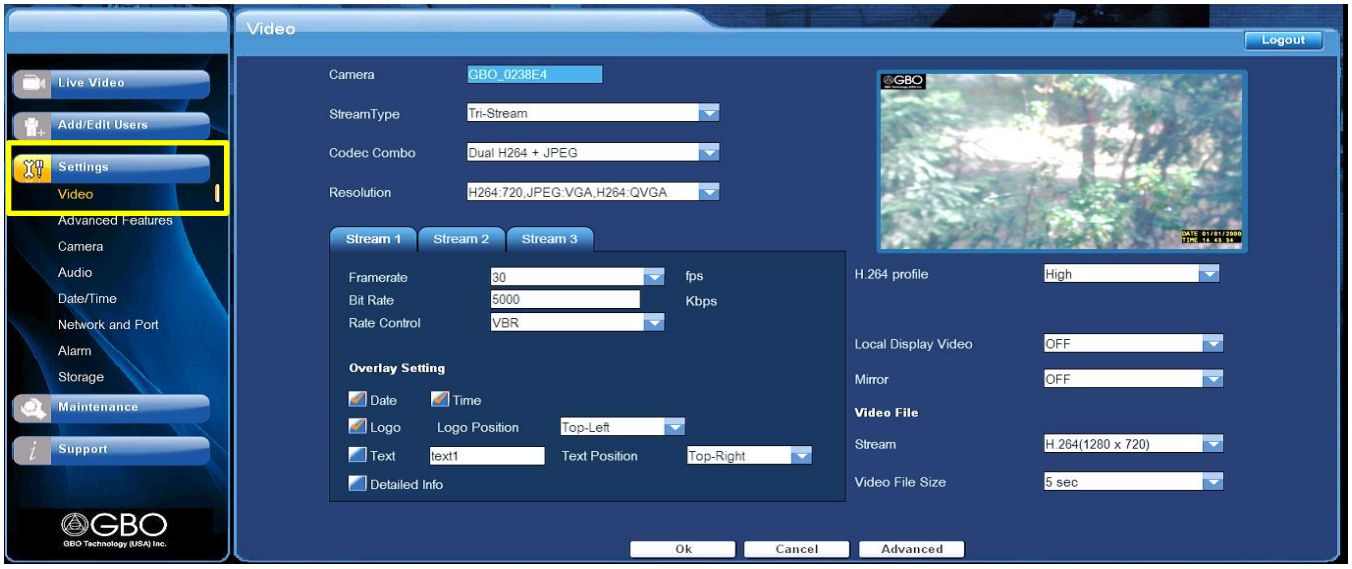


Figure 8.1 Video Screen

8.2.1 Camera

The camera's name is shown in the field.

8.2.2 Stream Type

Select the stream type from the drop-down list, as described in the table below. Depending on which tab is selected, Stream 1, 2, or 3 screens display.

The Stream 1 and Stream 3 screens are the same. The Stream 2 screen does not have either a **Bit Rate** or a **Rate Control** drop-down list, but has a **Quality Factor** drop-down list. Refer to ***APPENDIX A, Definitions***, for more information on these terms.

Table 8-1 Stream Type Options

Stream Type	
Single:	This is for single stream use cases only.
Dual:	This enables the dual stream use cases with second resolution.
Triple:	This enables the triple stream use cases.

8.2.3 Codec Combo

Refer to ***APPENDIX A, Definitions***, for more information on codecs. Select the desired **Codec** from the drop-down list, described in the table below.

Table 8-2 Codec Options

Type	Single/Dual/Triple
H264	Single
MPEG4	Single
MJPEGl JPEG	Single
H.264+JPEG	Dual
MPEG4+JPEG	Dual

Type	Single/Dual/Triple
Dual H.264	Dual
Dual MPEG4	Dual
H264+MPEG4	Dual
Dual H264+JPEG	Triple
Dual MPEG4+JPEG	Triple

8.2.4 Resolution

Select the desired resolution (number of pixels) from the drop-down list, as described in the table below. The options vary, depending on the combination of **Stream Type** and **Codec Combo**. The higher the number of pixels, the crisper is the image.

Table 8-3 Resolution

Stream Type	Codec Combo		Stream Type	Codec Combo		Stream Type	Codec Combo
1080	1920 x1080		SXVGA	1280 x 960		VGA	640 x480
720	1280 x720		D1	720 x480		QVGA	320 x240

8.2.5 H.264 Profile

Select the H264 profile from the drop-down list: **High**, **Main**, or **Base**. Refer to ***APPENDIX A, Definitions***, for more information on H.264 Profile settings.

8.2.6 Local Display Video

Select one of the following options for the display device from the drop-down list, described in the table below. In PAL countries, use a multiple of 50; in NTSC countries, use a multiple of 60.

Table 8-4 Local Display Options

Options	
OFF	Switches OFF the display
NTSC	Switches to National Transmission Standards Committee (NTSC) display @ 30fps (frames per second)
PAL	Switches to Phase Alternating Line(PAL) display @ 25fps

8.2.7 Mirror

Select one of the following required options from the drop-down list, described in the table below.

Table 8-5 Mirror Options

Mirror Options	
OFF	Turns OFF option.
VERTICAL	Flips the data in the vertical direction.
HORIZONTAL	Flips the data in the horizontal direction.
BOTH	Flips the data in both directions; equivalent to 180° rotation.

8.3 VIDEO FILE

8.3.1 Stream

From the drop-down list, select the stream to be saved in the AVI file. The available options are based on the combo used.

8.3.2 Video File Size

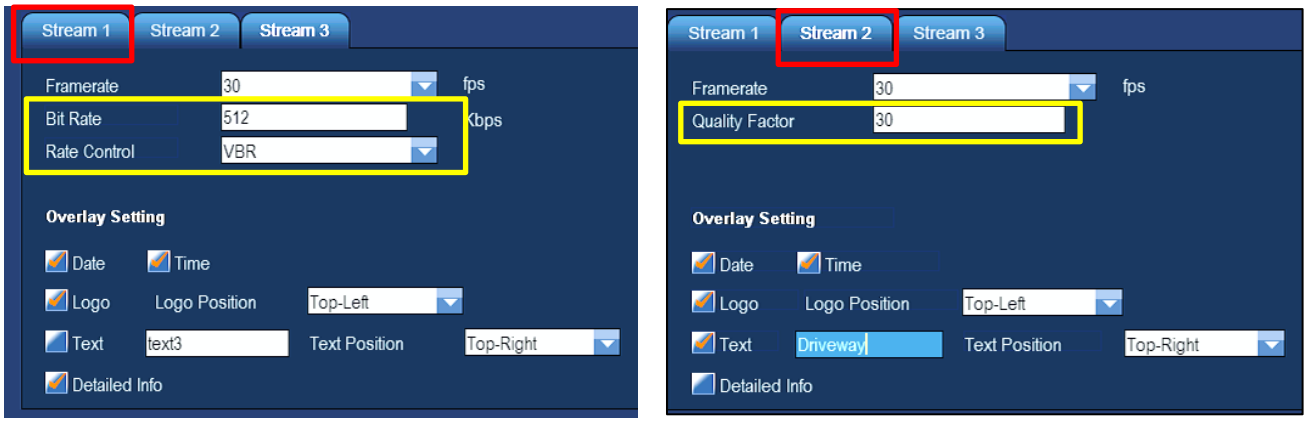
From the drop-down list, select the length of the AVI file to be saved for either a scheduled recording or an Alarm Trigger: 5 or 10 seconds.

NOTE:

If an SD card is installed in the camera, the **Video Size** option cannot be selected because it is set to **Auto**. The **Stream size** is defined by the length of the preset schedule and alarm duration (see **Section 17.2, Alarm Duration**) for setting the alarm. Recording does not stop until the SD card runs out of space.

8.4 STREAM 1, 2, AND 3 SCREENS

The Stream 1 and Stream 3 screens are the same. The Stream 2 screen does not have either a **Bit Rate** or a **Rate Control** drop-down list, but has a **Quality Factor** drop-down list. Refer to ***APPENDIX A, Definitions***, for more information on these terms.



Streams 1 and 3 **Stream 2**

Figure 8.2 Stream Screens

8.4.1 Frame Rate

Select the required frame rate for JPEG, MPEG4 and H.264. This selection changes, depending on the selected Codec Combo. Options include 1, 8, 15, 24, or 30 frames per second.

8.4.2 Bit Rate

Enter the required bit-rate for both the MPEG4 Setting and the H.264 Setting. Bit-rate values range from 64 to 12000 for Stream 1, and 64 to 8000 for Stream 2/Stream 3.

8.4.3 Rate Control

Select the required option from the drop-down list, as described in the table below. Refer to ***APPENDIX A, Definitions***, for more information.

Table 8-6 Rate Control Options

Rate Control Options	
OFF	This switches off the rate control and encodes the frame in constant QP mode for all MBs (Macro-Blocks) ➢ MPEG4 is encoded with QP = 4 ➢ H264 is encoded with QP = 28
VBR	Variable Bitrate (max_delay set is for 1000msec)
CBR	Constant Bitrate. This has frame skips to maintain bitrate with specified VBV buffer (max_delay set is for 1000 msec).

8.4.4 Quality Factor

The Stream 2 screen has a **Quality Factor** drop-down list instead of the **Bitrate** and **Rate Control** drop-down lists shown in Streams 1 and 3 (see Figure 8.2). Refer to ***APPENDIX A, Definitions***, for more information on quality factor. Enter the desired **Quality Factor** in the field.

8.5 OVERLAY SETTING

8.5.1 Date

Click on **Enable Date** checkbox to activate the date function.

8.5.2 Time

Click on **Enable Time** checkbox to activate the time function.

8.5.3 Logo

Click on **Enable Logo** checkbox to activate the logo function. This enables/disables insertion of a pre-selected logo onto a specified position of the captured image. Select from the drop-down list: Top-Left or Top-Right.

8.5.4 Text

Click on **Enable Text** checkbox to activate the text function. This enables/disables insertion of a pre-selected text onto a specified position of the captured image. Select from the drop-down list: Top-Left or Top-Right.

8.5.5 Detailed Info

Click on the **Detailed Info** checkbox to activate the detailed information function. This enables/disables insertion of camera information onto a specified position of the captured image (see Figure 8.3).

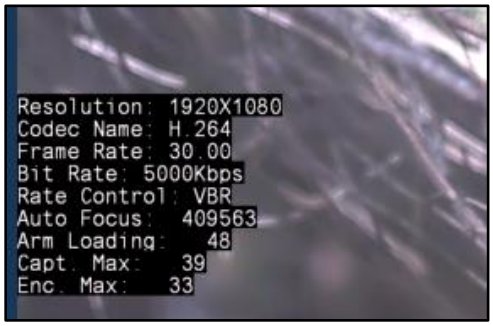


Figure 8.3 Detailed Camera Information Shown on Video Screen

8.6 SAVE CHANGES

Click on the **Ok** button to save any changes. The message, "Updating . . .," displays in the video window. The **Ok** button changes color to red to give the user a visual notification that the changes are being saved, and changes color back to silver when changes have taken effect. If you do not save your changes, a dialog box will prompt you.

9.0 VIDEO SCREEN'S ADVANCED SETTINGS

At this screen, you can set additional video features. Also, you can set Regions of Interest**,** where faces can be detected.

Select the **Settings** button and then select **Video**, and the **Video** screen displays (see Figure 8.1). Select the **Advanced** button (bottom right-hand side of screen) and the **Video > Advanced** screen opens (see Figure 9.1). The fields, drop-down lists, and radio buttons on this screen are described in the sections below.

NOTES:

1. To use **Advanced Options**, the user needs to know the Codec interfaces and implications of these settings.
2. The **Region of Interest** feature is supported **only** for H264 Codec, and has no significance for MPEG4 or JPEG options.

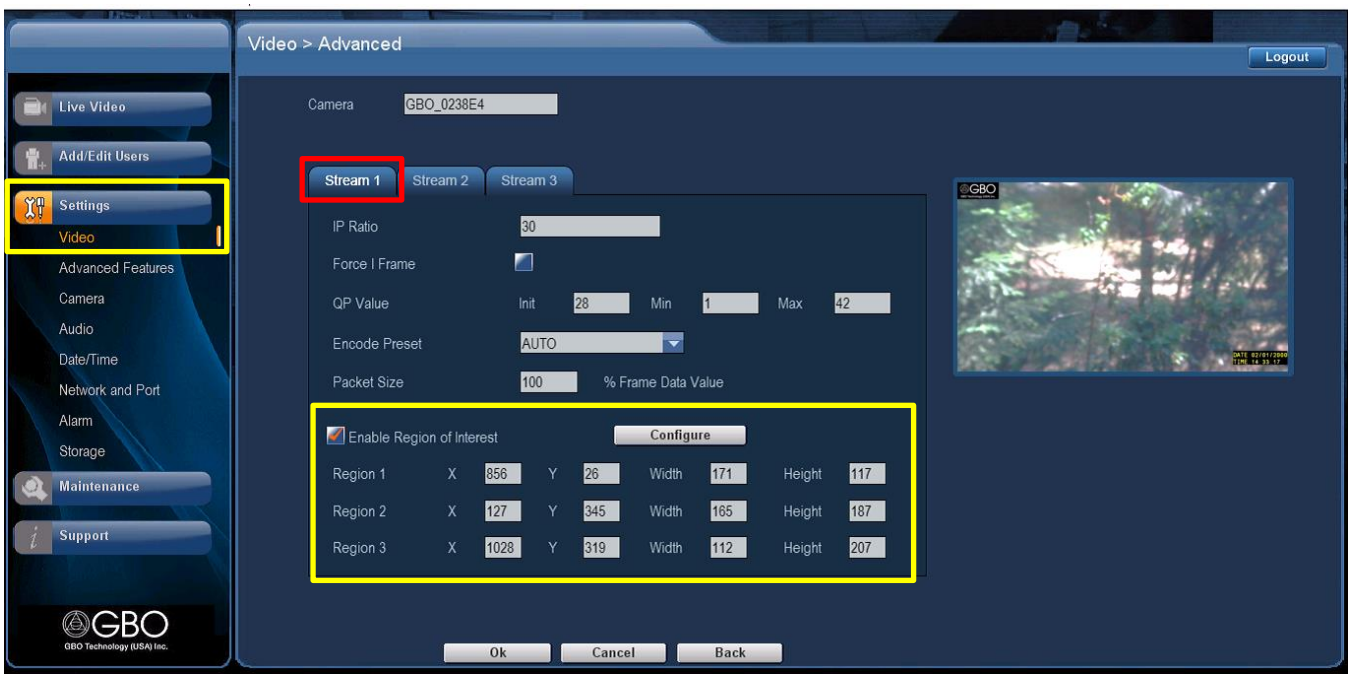


Figure 9.1 Video >Advanced Screen

9.1 STREAM 1, 2, AND 3 SCREENS

The Stream 1 and Stream 3 screens are the same. The Stream 2 screen contains a message, "No Advanced Setting for JPEG is available in this version." Refer to ***APPENDIX A, Definitions***, for more information on the terms on this screen.

9.1.1 IP Ratio

Enter the **IP Ratio** that needs to be set for the codec; the default value is 30. This means that once every 30 frames, one I frame is inserted. The value range is between 1 and 30.

9.1.2 Force I Frame

By clicking on this checkbox, the indicated stream (Stream 1, in this example) is enabled to insert an I frame at that instant. Once an I frame is inserted, this flag has no significance. In the GUI, this shows as checked (if selected), to show the user the last setting.

9.1.3 QP Value

The **Quantization Parameter (QP) Value** options described in the table below are supported.

Table 9-1 QP Value Options

QP Value Options	
Init	Value with which Codec starts encoding the Macro Blocks. When Rate Control is in OFF position, this value is used to encode all the frames.
Min	Minimum Value of QP with which Codec encodes the Macro Blocks.
Max	Maximum Value of QP with which Codec encodes the Macro Blocks

9.1.4 Encode Preset

The **Encode Preset** options described in the table below are supported.

Table 9-2 Encode Preset Options

Encode Preset Options	
Auto	This automatically sets the value based on the Codec combo used for the best tradeoff between performance and quality.
Custom	This enables a custom preset based on the Codec used: ➢ For H264, this enables a legacy version Codec ➢ For MPEG4, this switches all the tools and puts the Codec to maximum quality. Tools enabled are intra Algo, UMV, Skip MB and ME is put to High Quality mode.

9.1.5 Packet Size

The percentage value entered splits the frame into slices, and the packet header is introduced at row level slice boundaries. Please refer to *Codec Datasheet* supplied with the software release.

9.2 ENABLE REGION OF INTEREST

Enabling the **Region of Interest** checkbox at this screen, allows the user to select **three (3) Regions of Interest,** where faces can be detected.

9.2.1 Face Detection

1. Click on the **Enable Region of Interest** (ROI) checkbox and a **Configure Table** opens on top of the **Stream 1** section of the **Video>Advanced** screen (see Figure 9.2).
2. Click on the **Configure** button and the **Region of Interest** screen opens (see Figure 9.2).

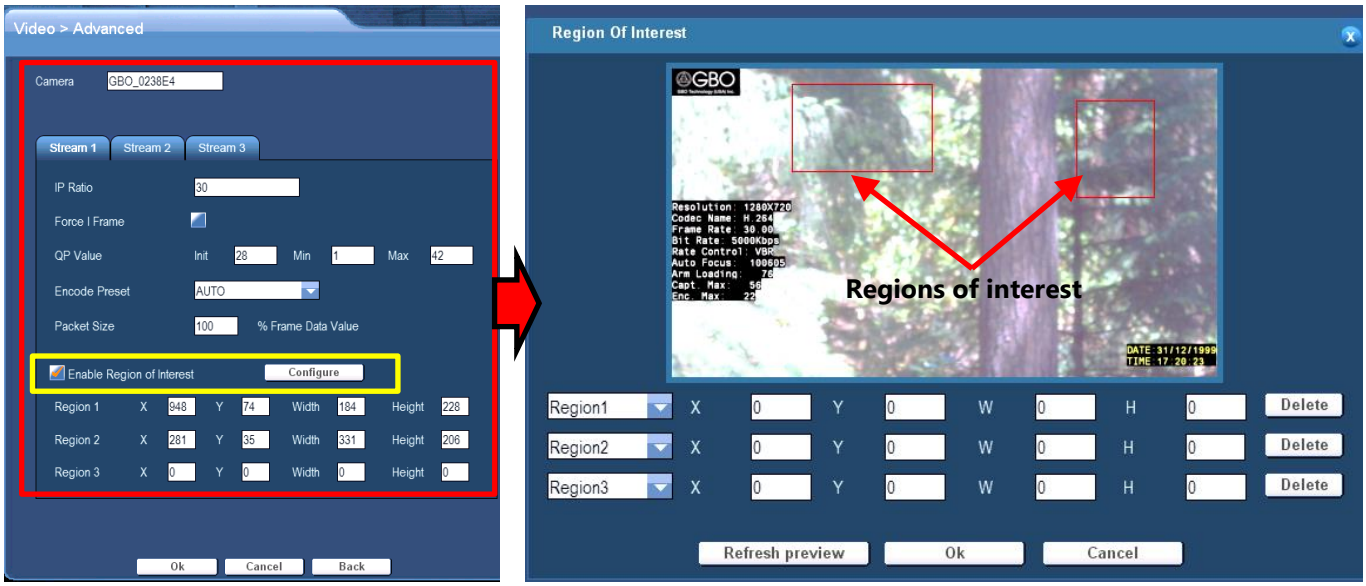


Figure 9.2 Advanced Video and Region of Interest Screens

3. Drag the mouse to draw the Region. Clicking on the **Delete** button removes the region.
4. Optionally, the user can enter the value directly into the X, Y, W and H text boxes. X and Y are the starting coordinates of the region, and W and H are the width and height of the region. The entire region is selected by default.
5. Click on the **OK** button to save your selections and wait for the changes to take effect.
6. Click on the **Back** button to return to the **Video Screen**. If you have not saved your changes, a dialog box will ask if you want them saved. Click **Yes** to save.

NOTE:

After the regions have been selected, Codec assigns better video quality to these regions by varying the QP value.

10.0 ADVANCED FEATURES SETTINGS

At this screen, the user can assign areas to detect motion to trigger a preset alarm, and assign blackout areas. Select the **Settings** button, and then select **Advanced Features**, and the **Advanced Features** screen opens (see Figure 10.1). The fields, drop-down lists, and radio buttons on this screen are described in the sections below.

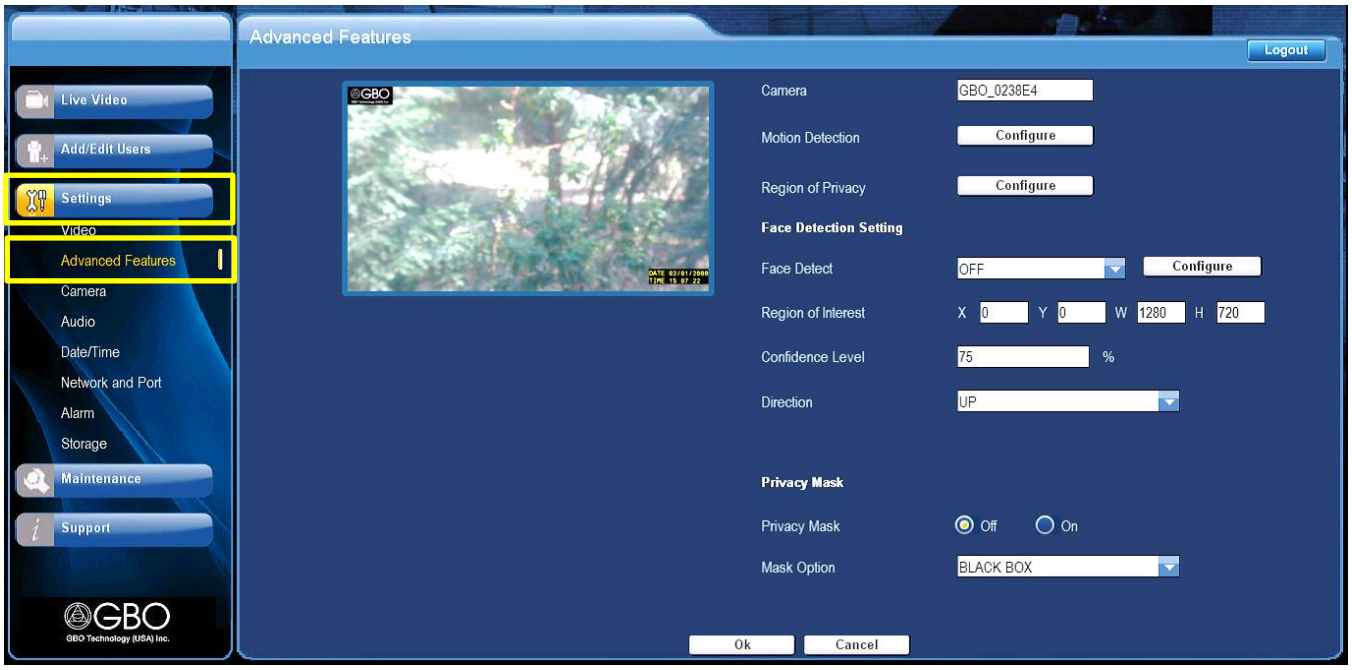


Figure 10.1 Advanced Features Screen

10.1 MOTION DETECTION SETTING

To preset an area of the live video screen to trigger an alarm whenever motion is detected in that area, click on the **Motion Detection Configure** button (see Figure 10.2), and the **Motion Detection** screen opens.

Figure 10.2 Configure Motion Detection Screen

NOTES:

1. The **Motion Detection** feature is disabled for MJPEG mode. The user needs to ensure that the primary Codec is H.264 or MPEG4.
2. Click **Enable Alarm** to select the save type (see **Section 17.0, Alarm**). The user may save the recording files through FTP and SMTP, or save it to the local SD card, if one has been installed in the camera (see Section 6.1.4.6.
3. In addition, the user can use **Alarm Duration** to specify the length of the recording file (see **Section 17.0, Alarm**).

10.1.1 Zone Selection

The video frame (screen) is divided into 48 zones (8 horizontal and 6 vertical). Place the mouse cursor on the video frame and left-click on the desired section, and the striped-red zone rectangles display. The user can set more than one targeted zone. Click a second time on a zone to de-select it.

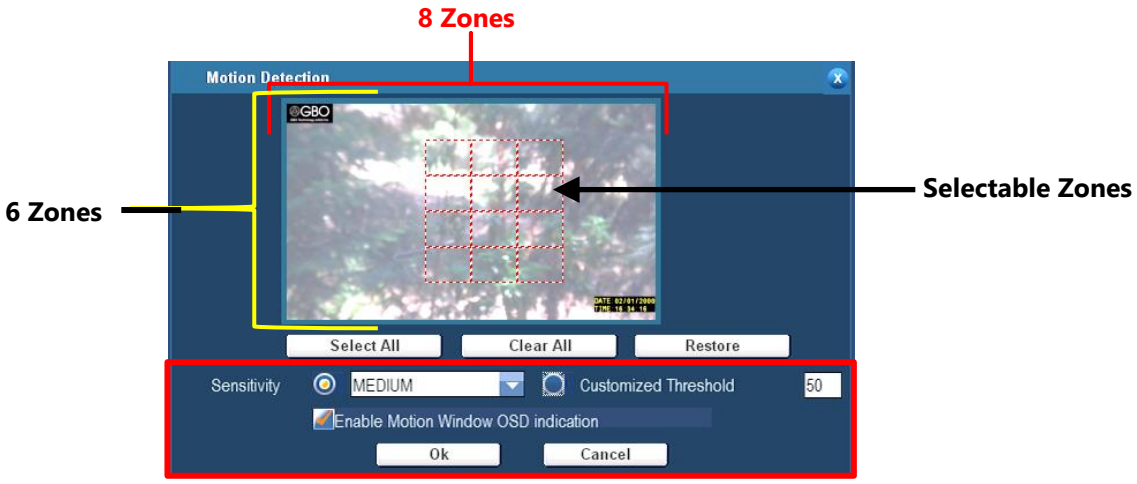


Figure 10.3 Motion Detection Setting Screen

10.1.2 Sensitivity

Select the sensitivity of the motion detection from the drop-down list: Low, Medium, or High.

10.1.3 Customized Threshold

Click on the **Customized Threshold** radio button to enter a customized threshold for the motion detection. The range is from 1 to 100.

10.1.4 Enable Motion Window OSD Indication

1. Click on the **Enable Motion Window OSD indication** checkbox to enable the on-screen display (OSD) feature (see Figure 10.4). The user receives visual feedback when motion is detected (see Figure 10.6).

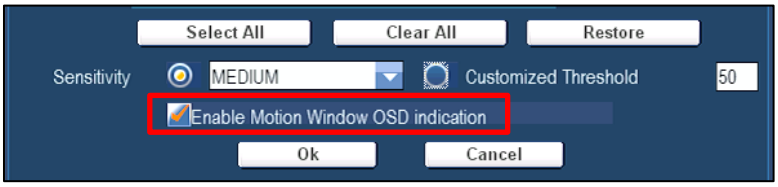


Figure 10.4 Enable Motion Window OSD Indicaton Screen

2. Click on the **Ok** button to save settings. A **Message** dialog notifies the user that the setting has been saved. Click the **Ok** button to close dialog.

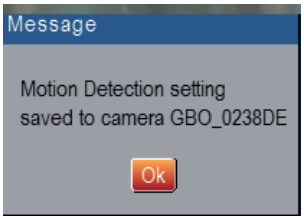


Figure 10.5 Setting Saved to Camera Message

3. At the **Live Video Screen**, the selected area blinks to alert the user to motion in that area and the **alarm** icon turns orange.

Figure 10.6 Motion Detected – Visual Notification on Live Video Screen

NOTE:

To enable motion detection in the specified regions, the **Motion Detection Alarm Trigger** must first be enabled (see **Section 17.0, Alarm**, for more detailed information).

10.2 REGION OF PRIVACY SETTING

To preset an area of privacy (blacked out) on the live video screen, click on the **Region of Privacy Configure** button (see Figure 10.1) and the **Region of Privacy** screen opens.

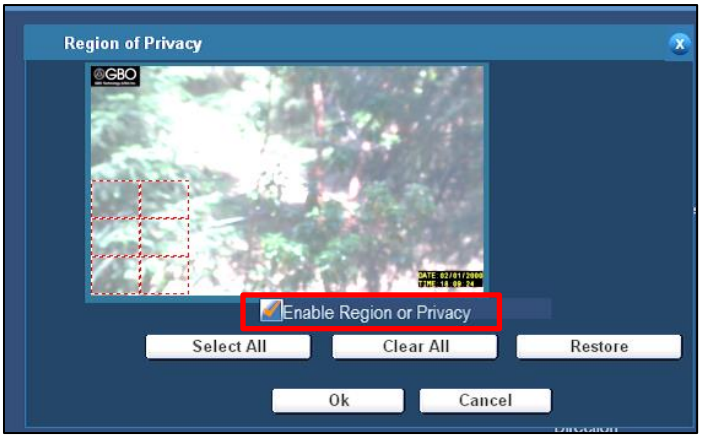


Figure 10.7 Region of Privacy Setting Screen

10.2.1 Zone Selection – Region of Privacy

The video frame (screen) is divided into 48 zones (8 horizontal and 6 vertical), the same as the **Motion Detection Setting Screen** (see Figure 10.3).

1. Click the **Enable Region of Privacy** checkbox to activate the privacy blocking feature.
2. Place the mouse cursor on the video frame and left-click on the desired section, and the striped-red zone rectangles display. The user can set more than one region of privacy.
3. Click a second time on a zone to de-select it.
4. Click on the **Ok** button to save settings. A **Message** dialog notifies the user that the setting has been saved.
5. Click the **Ok** button to close dialog.

The areas marked for privacy are shown as black boxes in the **Live Video Screen.**

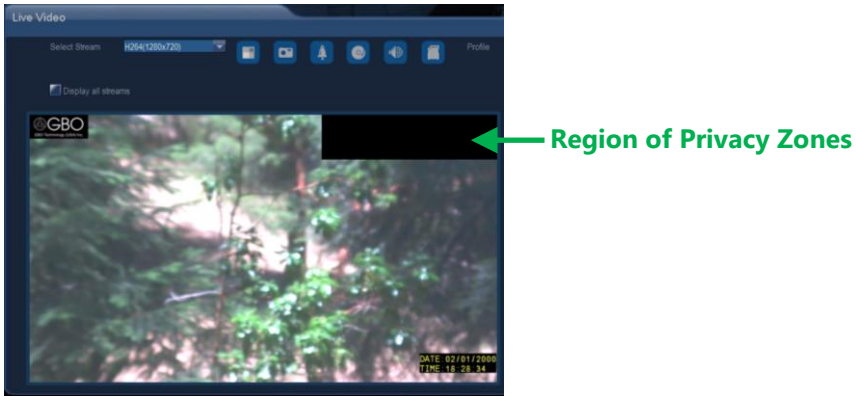


Figure 10.8 Live Video Screen Showing Privacy Zones

10.3 FACE DETECT SETTING

Select the desired face detect option from the drop-down list, as described in the table below, and then click on the **Configure** button. The **Region of Interest** screen opens (see Figure 10.9).

Table 10-1 Face Detect Options

Face Detect Options	
Off	Keeps the face detect feature turned off.
Detect	Draws a rectangle around the detected faces in the frame.
Enhanced Detect	Enables tracking of **faces** when the face-detect hardware is not able to detect them in certain frames.

10.4 REGION OF INTEREST

Clicking on the **Configure** button enables the region-of-interest-based face detection/mask feature. Faces are detected or masked only in the region specified by the user. The user can drag the mouse to draw the Region. Clicking on the **Clear** button removes the region.

Optionally, the user can enter the value directly into the X, Y, W and H text boxes. X and Y are the starting coordinates of the region, and W and H are the width and height of the region.

The entire region is selected by default.

Figure 10.9 Region Of Interest Screen

10.4.1 Confidence Level

The user can specify the accuracy of the face detection algorithm. Values range from 1 to 100, with 100 being highly confident. The default value is 75.

10.4.2 Direction

Several direction orientations are supported for faces to be detected.

Table 10-2 Face Detection Directions

Direction Options	
UP	detects faces in upward direction(default)
LEFT	detects faces in left direction
RIGHT	detects faces in right direction

10.5 PRIVACY MASK SETTING

When enabled, or turned ON, this setting draws a black box on detected faces in the frame. Click on the **Ok** button to save any changes and wait for the changes to take effect.

11.0 CAMERA SETTINGS

At this screen, the user can set the camera parameters. Select the **Settings** button and then select **Camera**, and the **Camera** screen displays. The fields, drop-down lists, and radio buttons on this screen are described in the sections below.

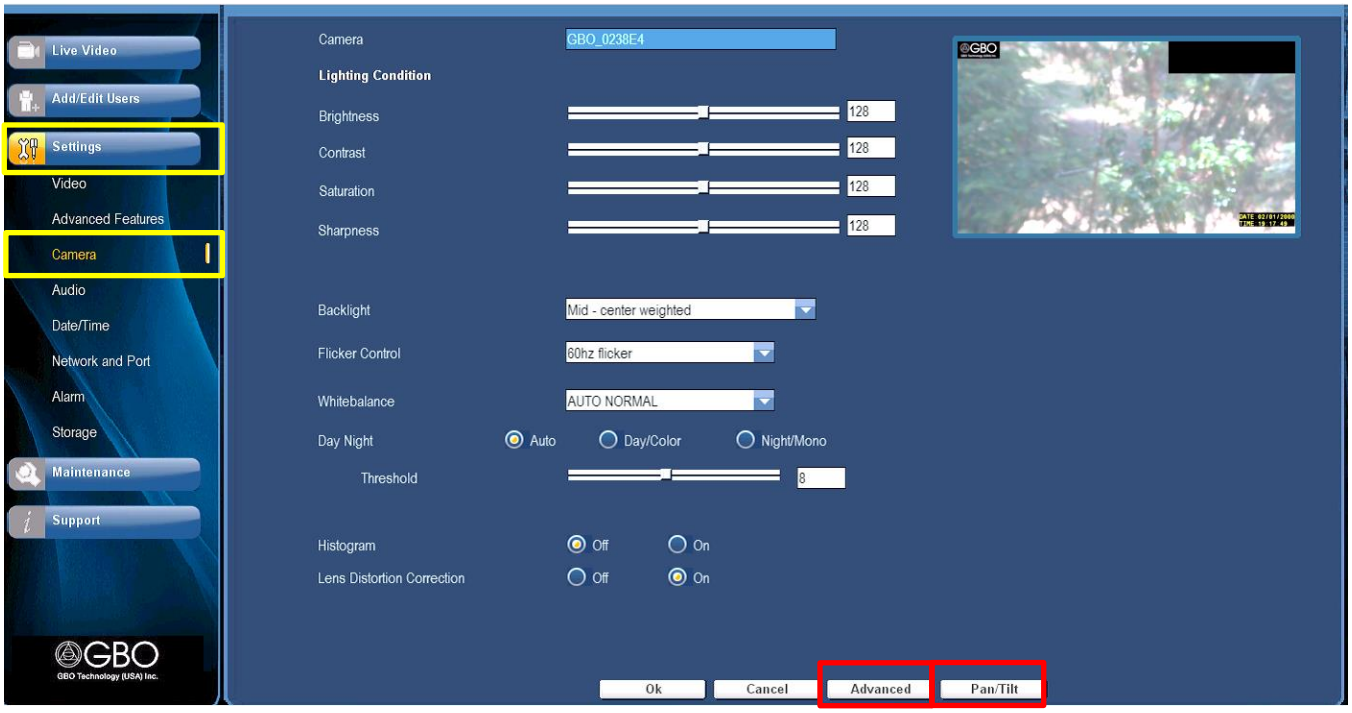


Figure 11.1 Camera Settings Screen

11.1 LIGHTING CONDITIONS

11.1.1 Brightness

Use the slider to specify the desired brightness level from 1 to 255, or enter a value in the field. A higher value of the brightness gives a brighter scene.

11.1.2 Contrast

Use the slider to specify the desired contrast level from 1 to 255, or enter a value in the field.

11.1.3 Saturation

Use the slider to specify the desired saturation level from 1 to 255, or enter a value in the field. A higher value of the saturation results in a more vivid scene.

11.1.4 Sharpness

Use the slider to specify the desired sharpness level from 1 to 255, or enter a value in the field.

11.1.5 Backlight

Specify the desirable metering modes from the drop-down list:

1. Min Whole image average
2. Mid Center weighted
3. Max Spot mode

11.1.6 Flicker Control

Specify the desired frequency of flicker control from the drop-down list. In PAL countries, use a multiple of 50; in NTSC countries, use a multiple of 60.

1. NTSC/60Hz: This setting compensates for 60Hz flicker and affects the display in NTSC mode.
2. PAL/50Hz: This setting compensates for 50Hz flicker and affects the display in PAL mode.

11.1.7 White Balance

Specify one of the following white balance modes from the drop-down list, as described in the table below. The default value is **Auto Normal**. Refer to ***APPENDIX A, Definitions***, for more information on white balance.

Table 11-1 White Balance Mode Options

White Balance Mode Options						
Auto Normal		Sunny		Indoor		FL1
Auto Wide		Shadow		Lamp		FL2

11.1.8 Day/Night

Specify one of the following mode options:

1. Auto
2. Day/Color
3. Night/Mono

11.1.8.1 THRESHOLD

Use the slider to specify the desired threshold level from 1 to 16, or enter a value in the field.

11.1.9 Histogram

Enable/disable histogram on the primary video stream: ON, or OFF.

11.1.10 Video Stabilization

Enable/disable video stabilization: ON, or OFF.

11.2 LENS DISTORTION CORRECTION

Enable/disable lens distortion: ON, or OFF.

NOTE:

Video Stabilization and Lens Distortion Correction are not supported for resolutions above 720P.

Click on the **Ok** button to save any changes and wait for the changes to take effect.

12.0 CAMERA – ADVANCED SETTINGS

At the **Camera Settings Screen** (see Figure 11.1**)**, click on the **Advanced Button**, located at the bottom-right side of the screen, and the **Camera->Advanced Screen** opens. The fields, drop-down lists, and radio buttons on this screen are described in the sections below.

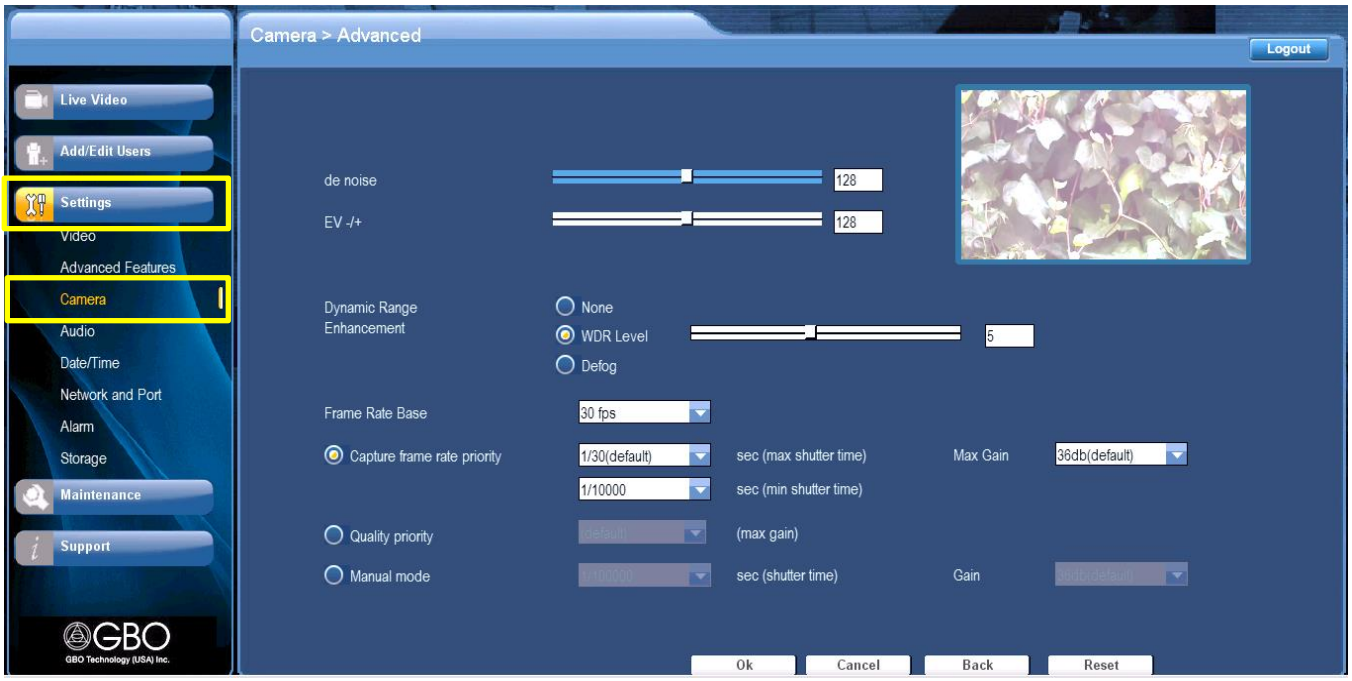


Figure 12.1 Camera > Advanced Screen

12.1 DE-NOISE

Use the slider to specify the desired noise filter level from 1 to 255. A higher value provides higher strength of the noise filter.

12.2 EV -/+

Use the slider to specify the desired exposure compensation level from 1 to 255. A higher value implies higher target brightness of the auto exposure. The image becomes brighter when the value is higher than 128.

12.3 DYNAMIC RANGE ENHANCEMENT

Click on the appropriate radio button to specify the dynamic range enhancement as:

1. NONE: Disables the wide dynamic range (WDR) function.
2. WDR Level: Enables the WDR function and sets the strength level from 0 to 10; use the slider to set value.
3. Defog: Enables the defog function.

12.4 FRAME RATE BASE

Select 25 or 30 frames per second (fps) for the drop-down list.

12.5 CAPTURE FRAME RATE PRIORITY

Specify the maximum and minimum shutter times in seconds from the drop-down lists, as described in the tables below. 1/30 is the default value for the maximum and the minimum.

Table 12-1 Maximum Shutter Speed Options

Maximum Shutter Speed Options								
1/2		1/15		1/120		1/750		1/2000
1/4		1/30 (default)		1/250		1/1000		1/10000
1/8		1/60		1/500		1/1500		1/100000

Table 12-2 Minimum Shutter Speed Options

Minimum Shutter Speed Options										
1/30 (default)		1/120		1/500		1/1000		1/2,000		1/100000
1/60		1/250		1/750		1/1500		1/10000		

12.5.1 Max Gain

Select the maximum gain from the drop-down list, described in the table below. 36db is the default value.

Table 12.3 Maximum Gain Options

Maximum Gain Options (db)						
0 db		12 db		24 db		36 db
6 db		18 db		30 db		

12.6 QUALITY PRIORITY

Specify the desirable maximum gain from the drop-down menu, as described in the table below.

Table 12-4 Quality Priority Maximum Gain Options

Maximum Gain Options (db)						
0 db		12 db		24 db		36 db
6 db		18 db		30 db		

12.7 MANUAL Mode

Specify the manual mode shutter time (in seconds) from the drop-down list, as described in the table below.

Table 12-5 Shutter Time for Manual Mode

Manual Mode Options (seconds)								
1/2		1/15		1/120		1/750		1/2000
1/4		1/30		1/250		1/1000		1/10000
1/8		1/60		1/500		1/1500		1/100000

12.7.1 Gain

Select the gain from the drop-down list, described in the table below. 36db is the default value.

Table 12.6 Manual Mode Gain Options

Gain Options (db)						
0 db		12 db		24 db		36 db
6 db		18 db		30 db		

Click on the **Ok** button to save any changes and wait for the changes to take effect.

13.0 PAN/TILT

At this screen, you can set the pan and tilt parameters. At the **Camera Settings Screen** (see Figure 11.1), click on the **Pan/Tilt Button**, located at the bottom-right side of the screen, and the **Camera > Pan/Tilt Screen** opens. The fields, drop-down lists, and radio buttons on this screen are described in the sections below.

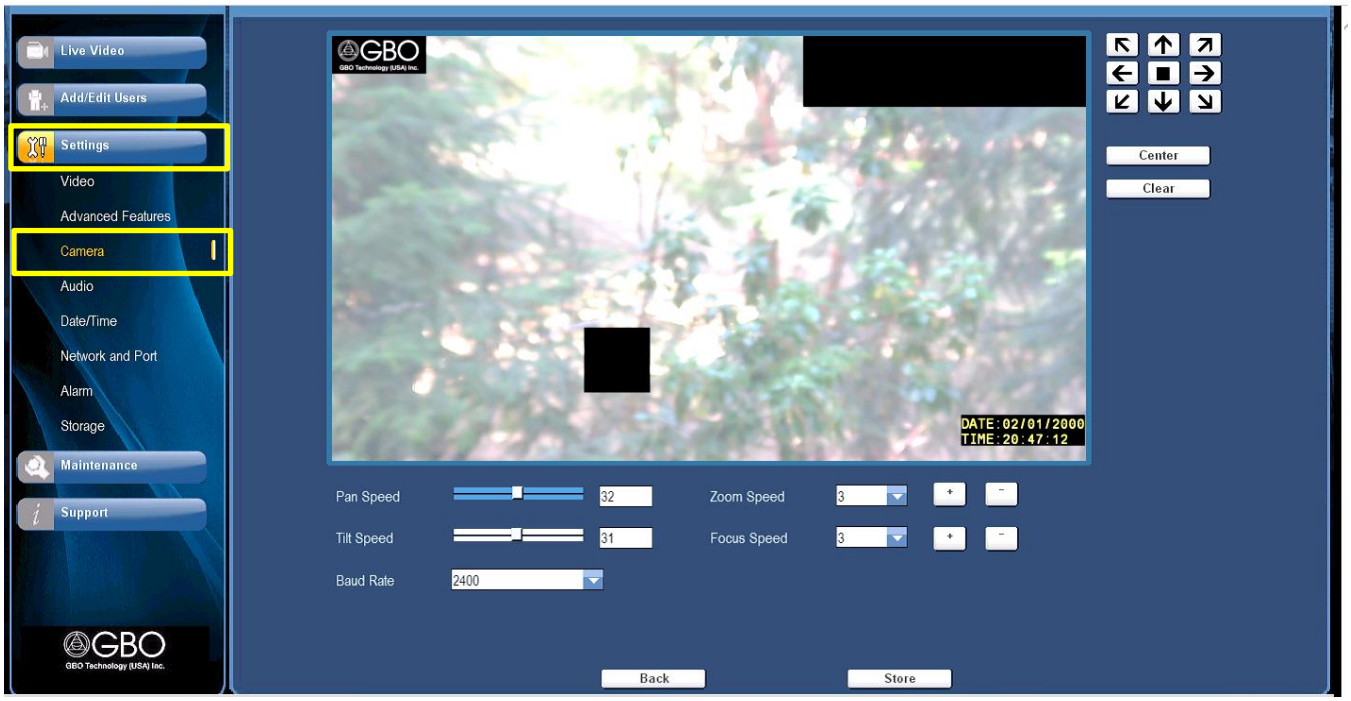


Figure 13.1 Camera > Pan/Tilt Screen

13.1 PAN SPEED

Use the slider to specify the desired pan speed from 0 to 64; the default is 32. A higher value gives a faster pan speed.

13.2 TILT SPEED

Use the slider to specify the desired tilt speed from 0 to 63; the default is 32. A higher value gives a faster tilt speed.

13.3 ZOOM SPEED

Specify the zoom speed from the drop-down list, from 0 to 3.

13.4 FOCUS SPEED

Specify the focus speed from the drop-down list, from 0 to 3.

13.5 BAUD RATE

Specify the baud rate from the drop-down list, as described in the table below.

Table 13-1 Baud Rate

Baud Rate								
110		1200		9600		38400		230400
300		2400		14400		57600		460000
600		4800		19200		115200		921600

Click on the **Store** button to save any changes and wait for the changes to take effect.

13.6 CENTER

Click first on the **Center** button, and then click on the **Store** button to center the camera on the desired location. Or, use the directional arrows to move the camera in the direction indicated, and then click on the **Store** button to save the camera position.

Figure 13.2 Alignment Controls

13.7 CLEAR

Click on the **Clear** button to clear all position settings.

13.8 STORE

Click on the **Store** button to save position changes.

13.9 BACK

Click on the **Back** button to return to the **Camera Settings Screen** (see Figure 11.1).

14.0 AUDIO SETTINGS

At this screen, you set the conditions for the speaker and microphone. Select the **Settings** button and then select **Audio**, and the **Audio** screen displays. The fields, drop-down lists, and radio buttons on this screen are described in the sections below.

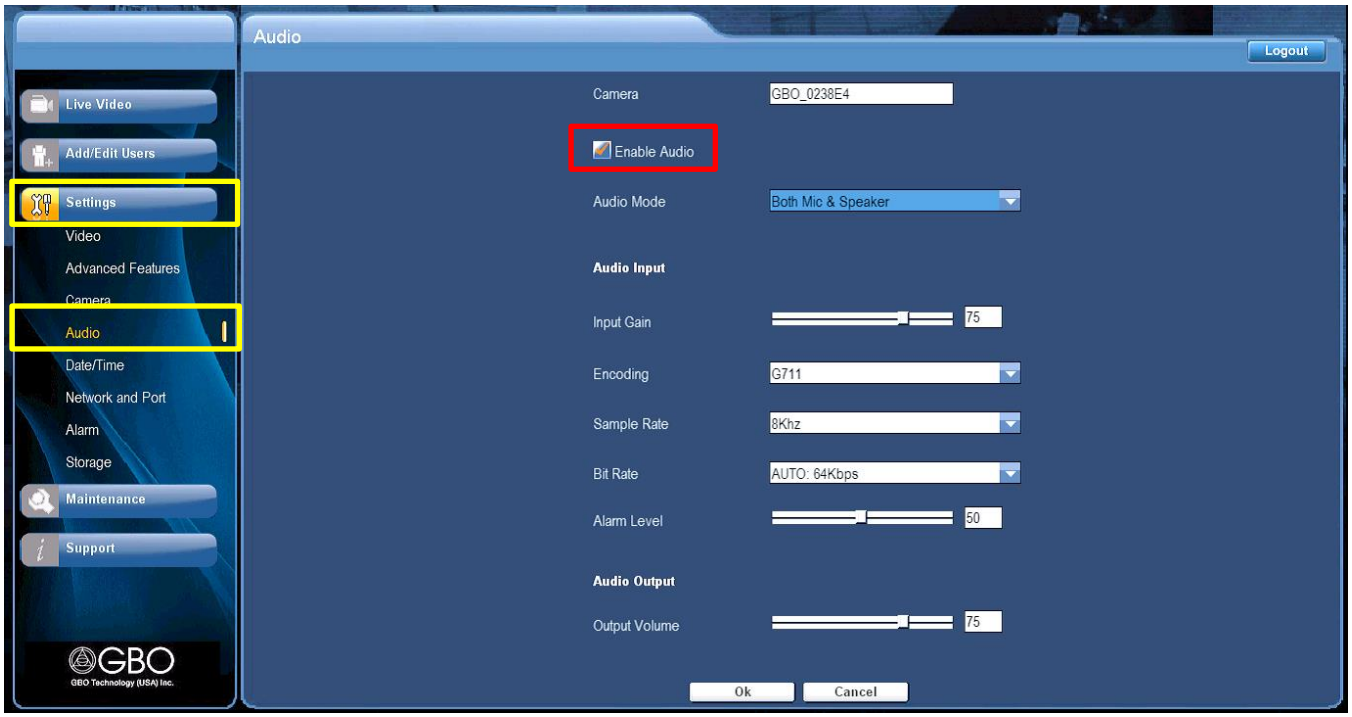


Figure 14.1 Audio Setting Screen

14.1 ENABLE AUDIO

Click the **Enable Audio** checkbox to enable/disable audio functionality in the camera.

Figure 14.2 Enable Audio Checkbox

14.2 AUDIO MODE

Specify one of the following audio modes from the drop-down list, as described in the table below.

Table 14-1 Audio Mode Options

Audio Mode Options	
MIC Only:	Enables audio capture only from camera Line-In
Speaker Only:	Enables audio playback only to camera Line-Out
MIC & Speaker:	Enables both audio playback & capture in camera

14.3 AUDIO INPUT

14.3.1 Input Gain

Use the slider to specify the input capture gain from 1-100. Setting this value to minimum **does not** mute the camera. The gain value depends on how loud you want the sound to be before you are notified.

14.3.2 Encoding

Specify audio encoding code from the drop-down list. Both G711 and AAC LC are supported.

14.3.3 Sample Rate

Specify audio capture sampling rate from the drop-down list. Both 8Khz and 16Khz are supported.

14.3.4 Bit Rate

The bitrate is in **Auto mode 64kbps**.

14.3.5 Alarm Level

Use the slider to specify the **Audio Level** that must be captured by the camera in order to trigger an audio alarm, from 0 to 100.

The **Enable Alarm** checkbox must be checked at the **Alarm Screen** before the alarm level can be set.

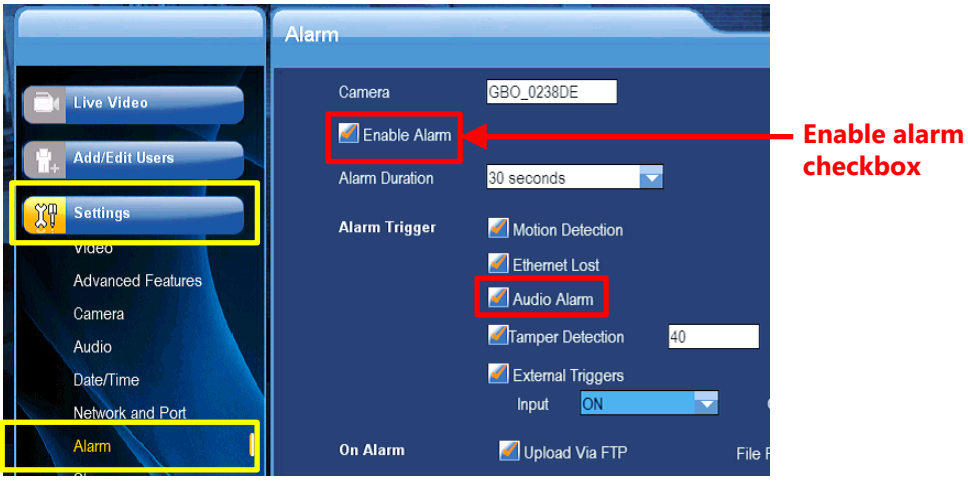


Figure 14.3 Alarm Screen – Enable Alarm

For example, if the **Alarm Level** is set to 50% and the **Audio Alarm** is enabled at the **Alarm Screen**, any captured audio samples that have a value **larger than**: $50 \times \frac{32768}{100} = 16384$, causes the alarm to be triggered.

14.4 AUDIO OUTPUT

14.4.1 Output Volume

Using the slider, specify the audio playback volume from 1-100.

Click on the **Ok** button to save any changes and wait for the changes to take effect

15.0 SET THE DATE AND TIME

At this screen, you can set the date and time in three different ways: manually, synchronized with your computer time, or synchronized with your SNTP server. These settings must be accurate so that the recordings have validity. Select the **Settings** button and then select **Date/Time**, and the **Date/Time** screen displays. The fields, drop-down lists, and radio buttons on this screen are described in the sections below.

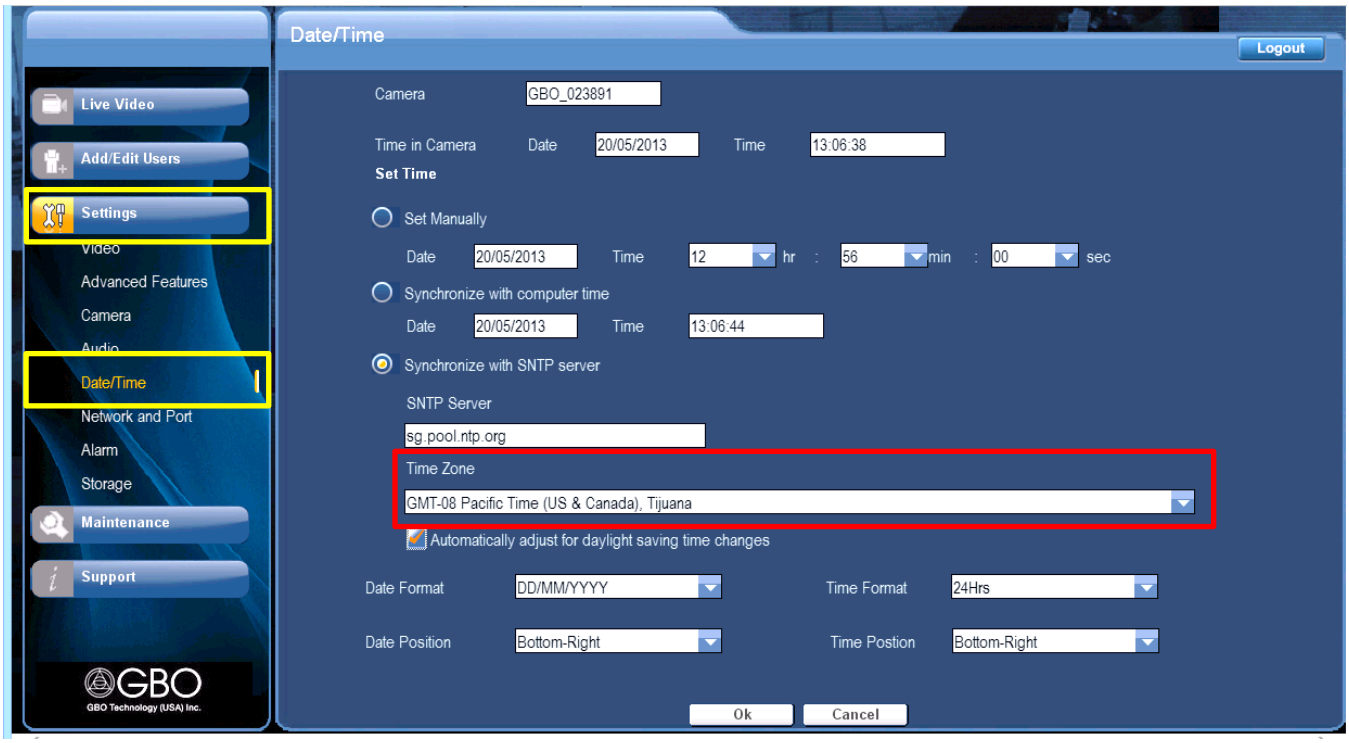


Figure 15.1 Date/Time Screen

15.1 SET TIME ZONE AND FORMATS

Before you make any selections, select your **Time Zone** from the drop-down list. There are 25 time zones for the user to select. If this is not set, the camera time may be incorrect.

15.1.1 Date Format and Position

From the **Date Format** drop-down list, select one of the options to specify the date format where MM is Month, DD is Day and YYYYY is Year.

From the **Date Position** drop-down list, select either bottom-left or bottom-right to specify the position of the date on the video frame:

15.1.2 Time Format and Position

From the **Time Format** drop-down list, select one of the following options to specify the time format on the video frame: 12-hour or 24-hour format.

From the **Time Position** drop-down list, select either bottom-left or bottom-right to specify the position of the time on the video frame:

15.2 SET MANUALLY

Select this option to enter the **Date** and **Time** in hours, minutes, and seconds in the appropriate fields.

1. Click in the **Date** field and a calendar opens on the screen.

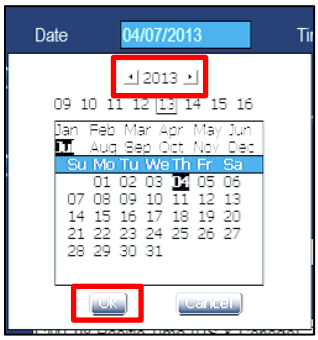


Figure 15.2 Calendar

2. Use the left and right arrows to find the correct year, click on the correct month, and then click on the correct day.
3. Click on the **Ok** button to close the calendar.
4. Enter the **hour**, **minutes**, and **seconds** from their drop-down lists.
5. Click on the **Automatically Adjust for Daylight Saving Time** checkbox so that the camera software can automatically adjust when the time changes twice a year.

NOTE:

Daylight Savings Time is implemented for several of the zones given in the drop-down list, but not all.

6. Click on the **OK** button and wait for the changes to take effect.

15.3 SYNCHRONIZE WITH COMPUTER TIME

1. Select this option to use your computer as the time source for the camera.
2. Click on the **Automatically Adjust for Daylight Saving Time** checkbox so that the camera software can automatically adjust when the time changes twice a year.
3. Click on the **OK** button and wait for the changes to take effect.

15.4 SYNCHRONIZE WITH SNTP SERVER

In order for the SNTP server synchronization to automatically set the date and time on the camera, a valid functioning Primary Name Server (PNS) address (one that is capable of translating the IP address) must be entered into the **SNTP Sever** field. Depending on the software version installed on your

camera, you can enter the **SNTP server** address at either the **Date/Time Screen** or the **Network and Port Screen**.

1. Click on the **Synchronize with SNTP server** radio button.

NOTE:

The **SNTP Server** field in the **Date/Time Screen** is read-only for software versions prior to V3.0.0.29. For these older versions, enter the **SNTP Server** information at the **Network and Port Screen** (see **Section 15.4.1, Enter SNTP Server Data at the Network and Port Screen**).

2. Enter the address of your **SNTP Server** into the **SNTP Serve**r field. Obtain the address from your IT personnel.
3. Click on the **Automatically Adjust for Daylight Saving Time** checkbox so that the camera software can automatically adjust when the time changes twice a year.
4. Click on the **Ok** button to save the changes and wait for them to take effect. The time and date are automatically synched with your SNTP server.

15.4.1 Enter SNTP Server Data at the Network and Port Screen

1. AT the **Web Browser GUI Screen** (see Figure 2.14), click on **Settings** and then click on **Network and Port** and the **Network and Port Screen** opens (see Figure 16.1).
2. At the **SNTP tab**, enter the address of your **SNTP Server** into the field. Obtain the address from your IT personnel.
3. Click on the **Ok** button to save the changes and wait for the changes to take effect.

15.5 TIME IN CAMERA

15.5.1 Date and Time

These fields show the current date and time in the GBOT S1080 IP Network Camera.

16.0 NETWORK AND PORT SETTINGS

At this screen, you enter the various parameters for the networks you use, and enable OnVIF, UPNP, and multicast, and other functions. Select the **Settings** button and then select **Network and Port**, and the **Network and Port** screen displays. The fields, drop-down lists, and radio buttons on this screen are described in the sections below.

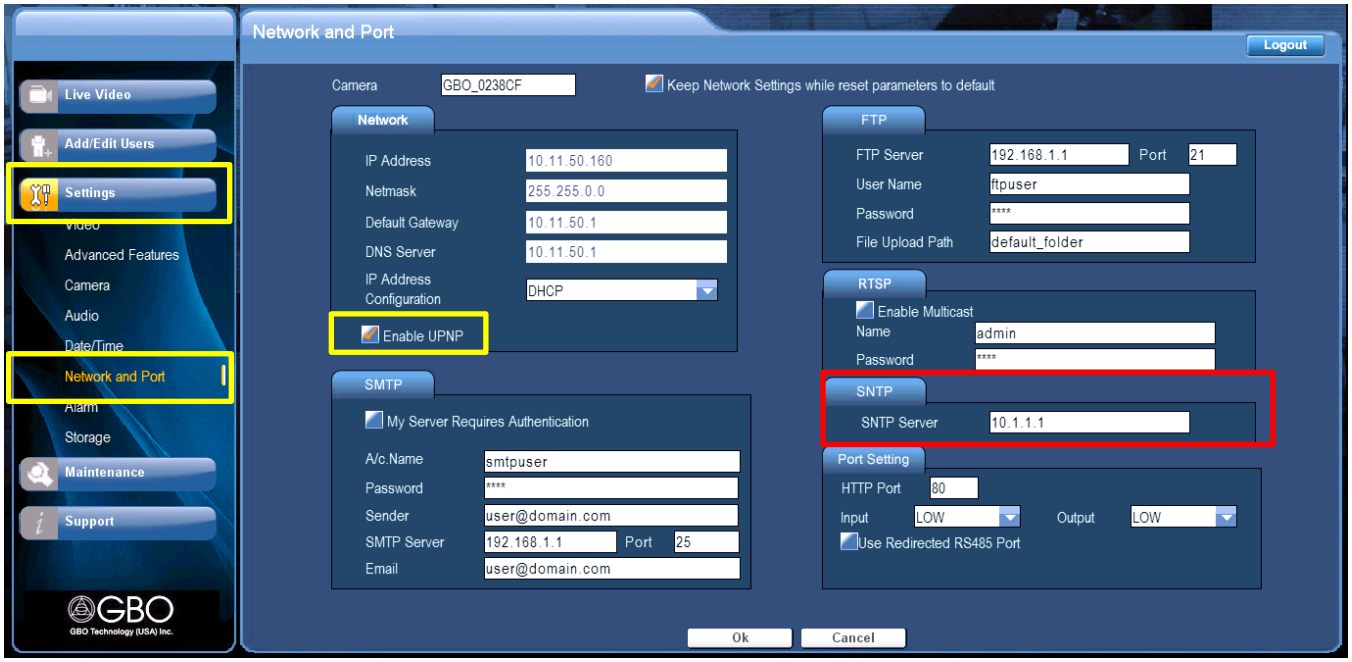


Figure 16.1 Network and Port Screen

16.1 KEEP NETWORK SETTINGS WHILE RESET PARAMETERS TO DEFAULT CHECKBOX

When using the **Maintenance** screen (see Figure 20.1) to RESET all camera settings to the factory default values, click on the **Keep Network Settings While Reset Parameters to Default** checkbox if you want to keep the Network and IP address settings.

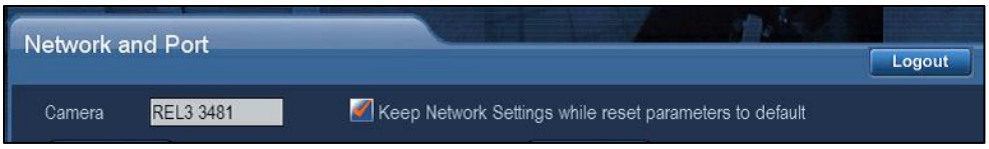


Figure 16.2 Keep Network Settings while Reset Parameters to Default Checkbox

16.2 NETWORK TAB

The **Enable UPNP** (User Plug and Play) checkbox is located in this tab. Click on it to enable its functionality.

The **Network Tab** lists the settings for the network your camera is currently connected to. To modify/change any of the settings, follow the instructions in the table below.

NOTE:

These fields are **read only** for DHCP and can be edited only if IP address Configuration is changed to **Static IP**.

Table 16-1 Network Tab Settings

Network Tab Settings	
IP Address	Enter the required 4-byte IP Address. The value can be from 0 to 255. Each network camera needs a unique IP address in order for it to be identified on the network.
Netmask	Enter the required 4-byte Subnet Mask. The value can be from 0 to 255. It is used to identify the subnet where the network camera is located.
Default Gateway	Enter the required 4-byte Gateway IP address. Each unit value can be from 0 to 255.
Primary Name Server	Enter the required 4-byte DNS server IP address. Each value can be from 0 to 255. The DNS Server translates the domain name to an IP address.

16.3 FTP TAB

NOTE:

1. Before setting all the parameters, first build the FTP server. For more information about the settings, consult a qualified IT/MIS administrator or your ISP.
2. FTP functions only when all the settings are accurately configured.

The **FTP Tab** lists your FTP information. To modify/change any of the FTP Tab settings to upload recorded videos and images, follow the instructions in the table below.

Table 16-2 FTP Tab Settings

FTP Network Settings	
FTP Server:	Enter the required FTP server domain name.
Port:	Enter the FTP network port number.
User Name:	Enter the required FTP login user name. A warning message is displayed if the data is not provided.
Password:	Enter the required FTP login password. A warning message is displayed if the data is not provided.
File Upload Path	Enter the required FTP file upload path.

16.4 SMTP TAB

The **My Server Requires Authentication** checkbox is located in this tab. Click on this checkbox to enable/disable this function.

NOTE:

SMTP does not work until all the settings are correctly configured.

To modify/change any of the SMTP Tab settings, follow the instructions in the table below.

Table 16-3 SMTP Tab Settings

SMTP Tab Settings	
Account Name:	Enter the required account name.
Password:	Enter the password.
Sender:	Enter valid e-mail address of the sender.
SMTP Server	Enter the required SMTP server domain name.
Email Address	Enter the required e-mail address of the recipient.

16.5 RTSP TAB

The **Enable Multicast** checkbox is located in this tab. Click on this checkbox to enable/ disable the multicast function. To modify/change any of the RTSP Tab settings, follow the instructions in the table below.

Table 16-4 RTSP Tab Settings

RTSP Tab Settings	
Name:	Enter the required user name used for RTSP basic authentication.
Password:	Enter the password used for RTSP basic authentication.

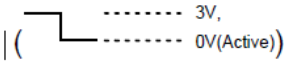
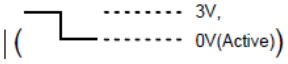
16.6 SNTP TAB

Enter the required SNTP server domain name.

16.7 PORT SETTING TAB

To modify/change any of the Port Setting Tab settings, follow the instructions in the table below.

Table 16-5 Port Setting Tab Settings

Port Setting Tab Settings	
HTTP Port:	Enter the Hyper Text Transfer Protocol (HTTP) Port # for the Web Server running inside the camera. The default value is 80.
Output(ALARM OUT):	This is an alarm output trigger. Connect it to external devices, such as buzzers or lights. It can be programmed to active low or active high. 
Input(ALARM IN):	This is an alarm input and can be triggered with a digital signal. It can be programmed to active low or active high. Active Type means level triggered as input and level driven as output. 

Click on the **Ok** button to save any changes and wait for the changes to take effect.

17.0 ALARM

At this screen, you set the conditions for the alarm to be triggered and the location where the files are saved to. Select the **Settings** button and then select **Alarm**, and the **Alarm** screen displays. The fields, drop-down lists, and radio buttons on this screen are described in the sections below.

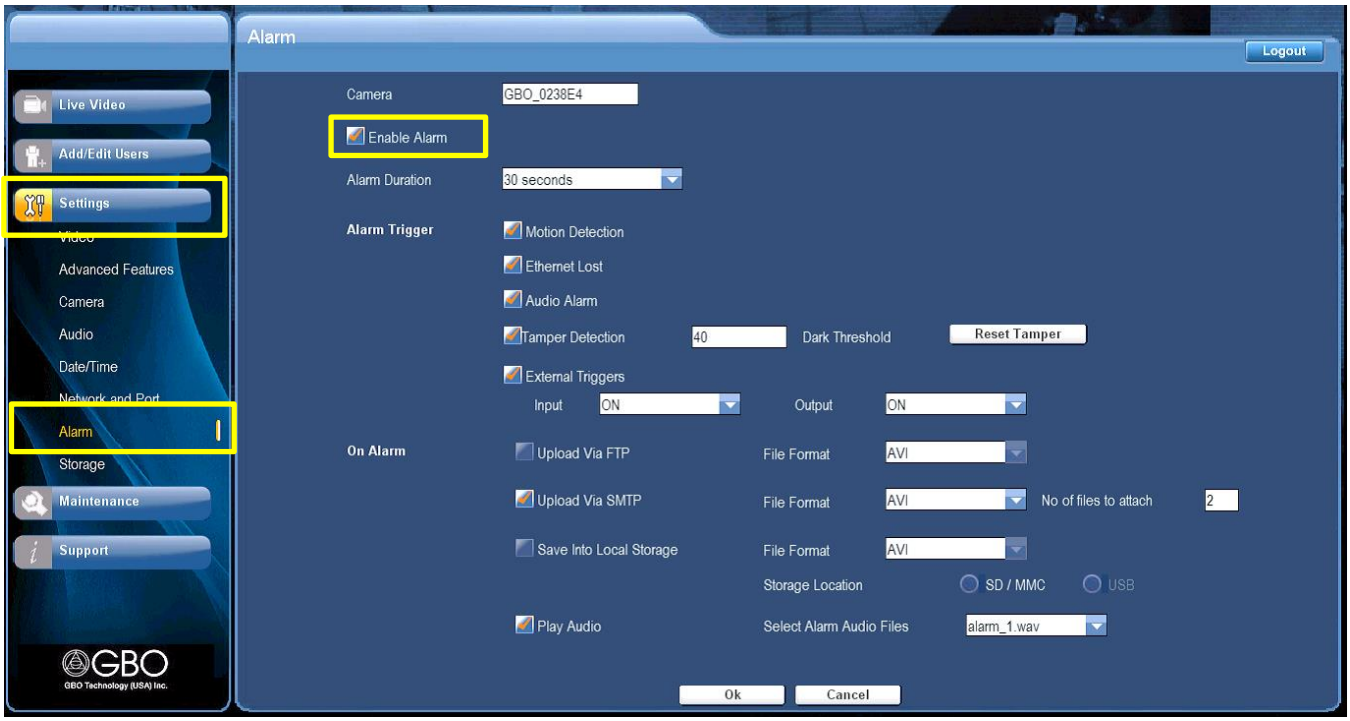


Figure 17.1 Alarm Setting Screen

17.1 ENABLE ALARM CHECKBOX

Click on the **Enable Alarm** checkbox to enable/disable the alarm function of the camera.

17.2 ALARM DURATION

Select the duration for the alarm from the drop-down list, as described in the table below. This option determines/sets how long the ALARM should be ON after it is triggered

Table 17-1 Alarm Duration Options

Alarm Duration Options				
10 sec		1 min		10 min
30 sec		5 min		Non-stop

17.3 ALARM TRIGGER

Select how the alarm is to be triggered by enabling/disabling the following **Alarm Triggers**.

17.3.1 Motion Detection

When enabled, this checkbox triggers an alarm when motion is detected.

17.3.2 Ethernet Lost

When enabled, this checkbox triggers an alarm when the Network Connection is lost.

17.3.3 Audio Alarm

When enabled, this checkbox triggers an alarm if the audio level exceeds the alarm level set in the **Audio Screen** (see Section 14.3.5).

17.3.4 Tamper Detection

When enabled, this checkbox triggers an alarm if the lens is out of the current reference focus, if the scene is too dark, or if the camera has been vandalized.

17.3.4.1 DARK THRESHOLD

From the **Dark Threshold** drop-down list, select a threshold for the dark scene from 20 to 100. A lower value means that the detection is triggered on a darker scene.

17.3.4.2 RESET TAMPER

When Tamper Detection is enabled/checked, this button is visible. It resets the reference focus value based on the current scene. If the current focus value of the scene deviates too much from the reference value, a tamper alarm is triggered. When rebooting, the camera performs a "Reset Tamper" automatically.

17.4 EXTERNAL TRIGGERS

Select how the alarm is to be triggered by enabling/disabling the **External Triggers** checkbox.

17.4.1 External Triggers - Input

From the **Input Triggers** drop-down list, enable/disable the trigger alarm that is based on the level of sound that is triggered by external sources.

- ON: Enable. Corresponding to the ALM-IN on the back of the camera
- OFF: Disable

17.4.2 External Triggers - Output

From the **Output Triggers** drop-down list, enable/disable the trigger alarm to drive the alarm level to external sources.

- ON: Enable. Corresponding to the ALM-OUT on the back of the camera
- OFF: Disable

17.5 ON ALARM (SAVE FILES TO STORAGE DEVICE)

Enable/disable the **On Alarm** buttons to specify where the files are saved.

NOTES:

1. The FTP, SMTP server settings have to be configured first at the **Network and Port Screen** (see Section 16.0).
2. Limit the size of outgoing video clips via email. For more information, consult a qualified IT/MIS administrator or your ISP.
3. Access is based on the SD card's speed. Use a high-speed SD card to increase the access efficiency.
4. To enable **Alarm Audio Playback**, the user needs to enable **Audio with Speaker** mode (see **Section 14.2, Audio Mode**).
5. For H.264 and MPEG4 files, the number of files attached for SMTP is one, even though it is set for higher values. For the number of attachments, a number higher than one is valid only for JPEG streams.

17.5.1 Upload via FTP

Enable the **Upload Via FTP** checkbox in order to be able to upload a recording to FTP.

17.5.1.1 FILE FORMAT

Specify the supported file format: AVI or JPEG.

17.5.2 Upload via SMTP

Enable the **Upload Via SMTP** check box in order to send an email with a recording as an attachment.

17.5.2.1 FILE FORMAT

Specify the supported file format: AVI or JPEG.

17.5.2.2 NUMBER OF FILES TO ATTACH

Enter the number of images per email. The maximum is 20.

17.5.3 Save Into Local Storage

Enable the **Save into Local Storage** checkbox to save the recording to the SD card in the camera (only if an SD card is currently installed in the camera).

17.5.3.1 FILE FORMAT

Specify the supported file format: AVI or JPEG.

17.5.3.2 STORAGE LOCATION

Select **SD/MMC card**, which is supported in the installed software.

17.6 PLAY AUDIO

Enable the **Play Audio** checkbox in order to play audio via the **Audio Line Out** on the back of camera. Insert one end of the cable into the A/V slot and the other end into the desired audio device.

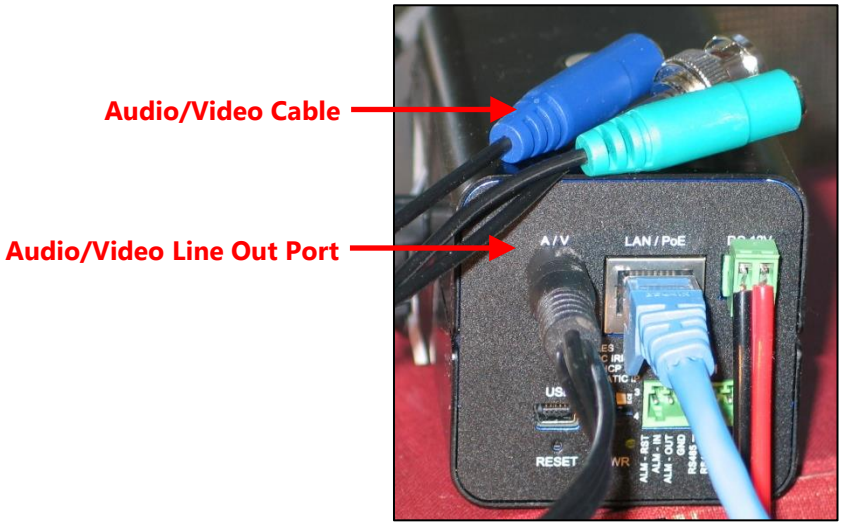


Figure 17.2 Back of Camera ShowingAudio Line Out Port and Cable

17.6.1 Select Alarm Audio Files

Select from the drop-down list, which **Alarm Audio** plays when the alarm is triggered.

Click on the **Ok** button to save any changes and wait for the changes to take effect.

18.0 STORAGE SETTINGS

At this screen, you create a recording **Schedule** and select to upload the files to FTP or save them on the SD card (local storage). Select the **Settings** button and then select **Storage**, and the **Storage** screen displays. The fields, drop-down lists, and radio buttons on this screen are described in the sections below.

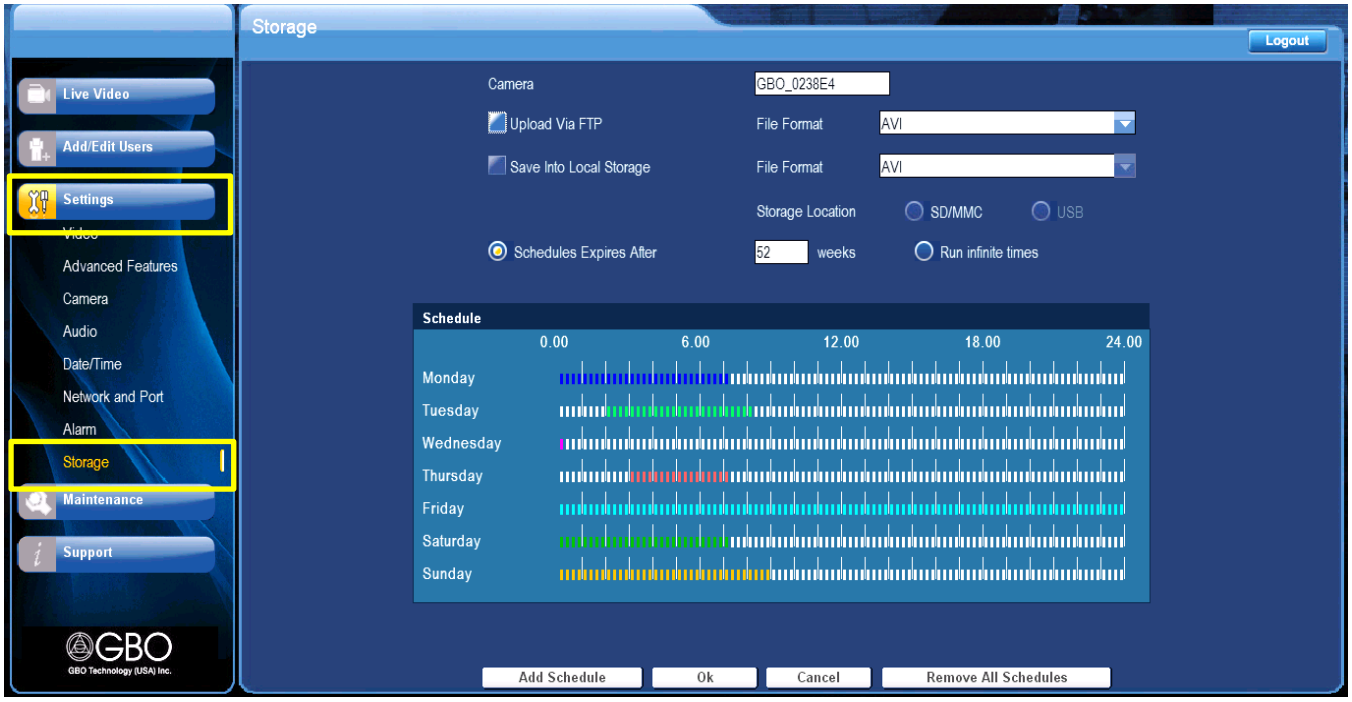


Figure 18.1 Storage Screen

18.1 SAVE INTO LOCAL STORAGE

Enable the **Save into Local Storage** checkbox to save the recording to the SD card in the camera (only if an SD card is currently installed in the camera).

18.2 UPLOAD VIA FTP

Click on the **Upload Via FTP** checkbox to activate/deactivate recording to the FTP server.

NOTE:

Ensure that the FTP server settings are configured at the **Network and Port Screen** (see Figure 16.1) before selecting that option.

18.2.1 File Format

Specify the supported file format for both storage choices: AVI or JPEG.

18.2.2 Storage Location

Select **SD/MMC** card.

18.3 SCHEDULE EXPIRES AFTER

Click on the **Schedule Expires After** checkbox, and then enter the number of weeks from 1 to 99.

18.4 RUN INFINITE TIMES

Click on the **Run Infinite Times** radio button to enable a loop that runs until the schedule is RESET by the user.

18.5 ADD SCHEDULE

1. The **Add Schedule** button is located at the bottom left-hand side of the **Storage** screen.

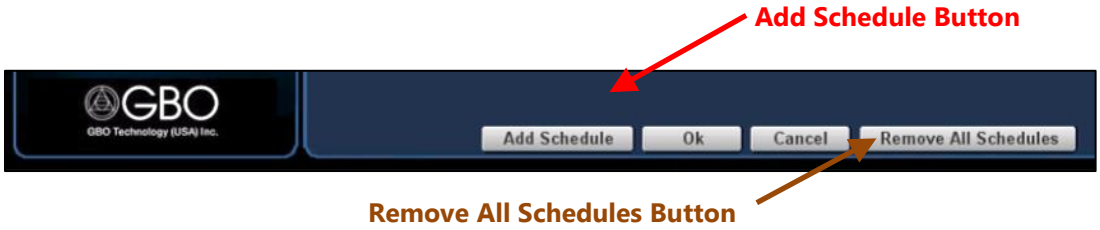


Figure 18.2 Add and Remove Schedule Buttons

2. Click on this button to open or add a recording schedule, and the **Schedule** screen opens.

Weekday Checkboxes
Schedule
Monday From 05 00 To 09 00
Tuesday From 05 00 To 07 00
Wednesday From 04 00 To 07 00
Thursday From 03 00 To 14 00
Friday From 05 00 To 09 00
Saturday From 05 00 To 22 00
Sunday From 01 00 To 23 00
Ok
Cancel

Figure 18.3 Setting a Recording Schedule Screen

3. Click on any of the seven weekday checkboxes to enable/disable the programmed recording. Select the **From** and **To** times from the drop-down lists from 00 to 23.
4. Click on the **Ok** button to save the schedule and return to the **Storage Screen**. The Schedule Screen now shows the recording schedule you just created (see Figure 18.4).

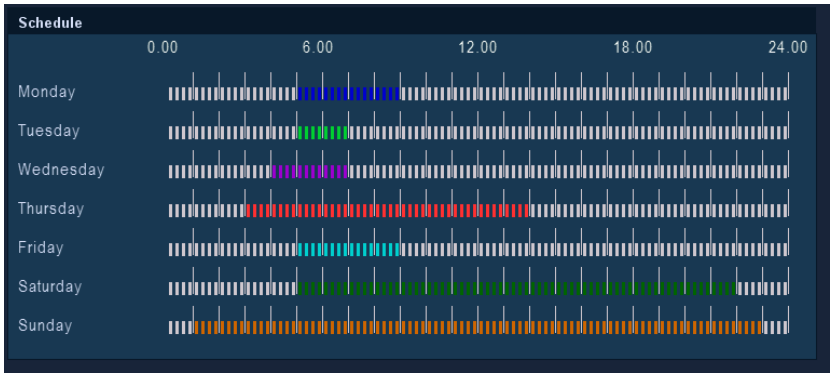


Figure 18.4 Schedule Screen Showing Selected Times and Days for Recording

18.6 REMOVE ALL SCHEDULES

The **Remove All Schedules** button is located at the bottom right-hand side of the **Storage** screen (see Figure 18.2). Click on this button to clear the fields in the **Setting a Recording Schedule** screen and remove the entire schedule.

After entering any new information, click the **Ok** button for the change(s) to take effect.

19.0 SD CARD EXPLORER SCREEN

At this screen, you can view the files on the SD card, download them, and delete them.

At **Web Browser GUI Screen** (see Figure 2.14), click on the **SD Card Explorer** icon, and the **SD Card Explorer** screen displays. The fields, drop-down lists, and radio buttons on this screen are described in the sections below.

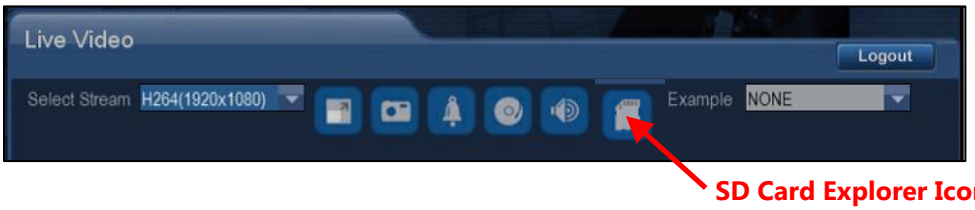


Figure 19.1 Location of the SD Card Explorer Icon

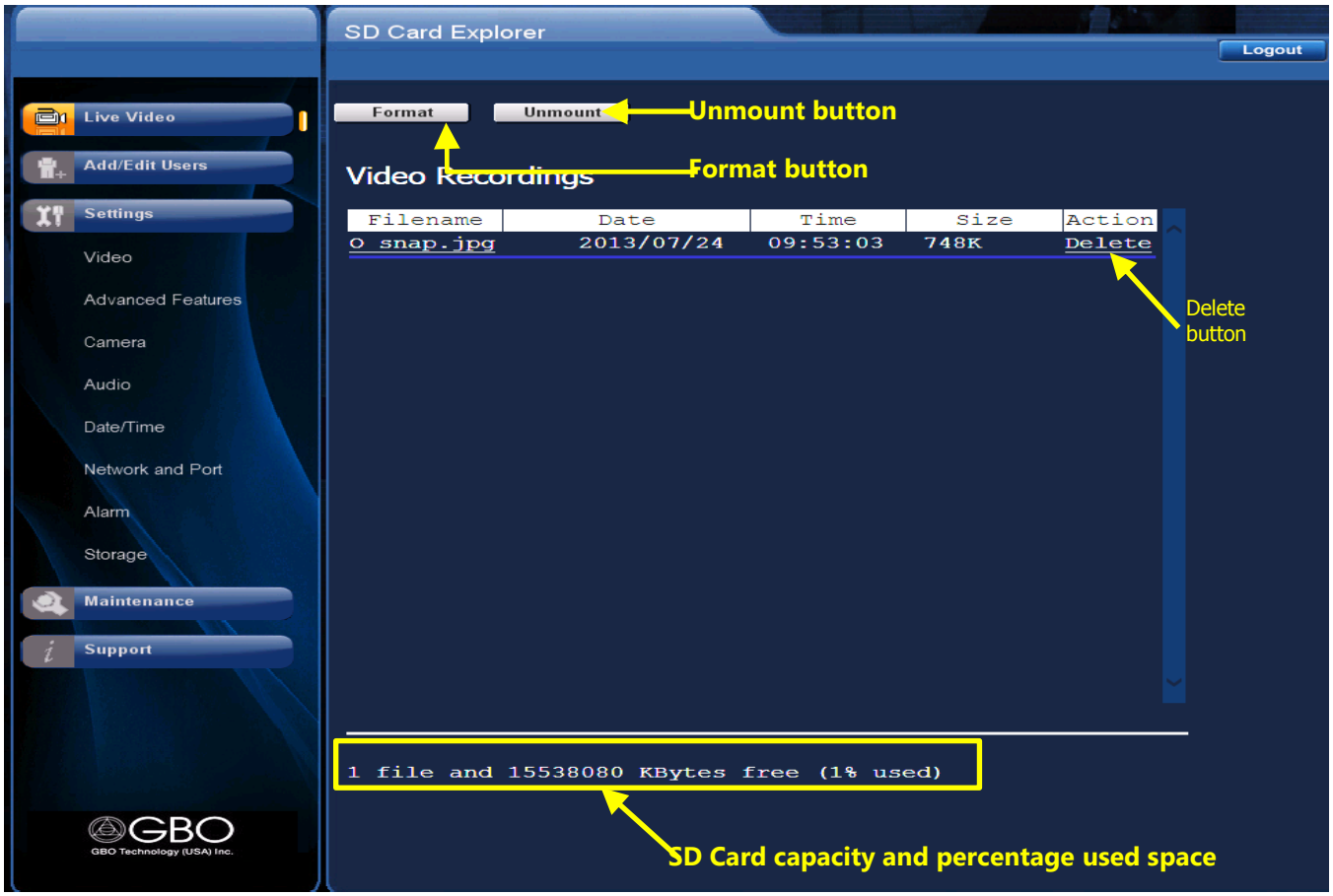


Figure 19.2 SD Card Explorer Screen

19.1 FORMAT BUTTON

CAUTION:

Clicking on the **Format** button DELETES ALL files on the SD Card.

Click on the **Format Button** to **DELETE ALL** files on the SD card and format the card.

19.2 UNMOUNT/MOUNT BUTTON

Click on the **Unmount Button** to release the SD Card before it is removed from the camera. The button changes to the **Mount** button.

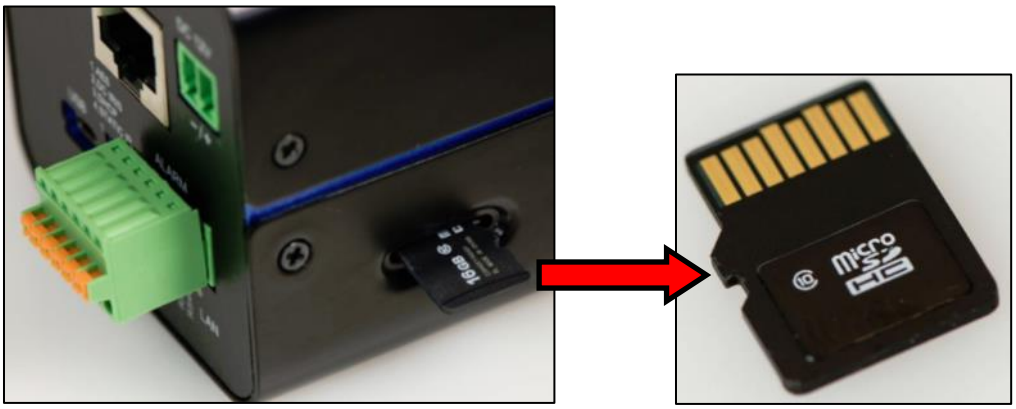


Figure 19.3 SD Card and SD Card Inserted into Camera Receptacle

The SD card can be inserted directly into your PC via a compatible card reader, and the files can be viewed or deleted.

19.3 FILELIST OF MEMORY CARD TABLE

The **Filelist of Memory Card** table shows the **Filename**, **Date**, **Time**, **Size** and available **Action** of the files stored on the SD Card. Beneath the table is shown the total size of the SD card and how much space is still available.

Use the scrollbar to browse through the list. Click on **Delete** to remove any file.

NOTE:

The access throughput depends on the SD card speed. Use a high-speed SD card to increase the performance.

19.4 NO SD CARD INSTALLED

If no SD card has been installed in the camera, the SD card icon will not show in the icon list.

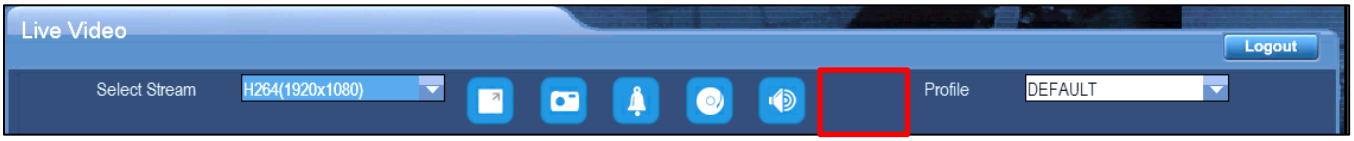


Figure 19.4 Icon List on Live Video Screen

And, you will not be able to select it at the Storage Screen.

Figure 19.5 Storage Screen

20.0 MAINTENANCE PAGE

At this screen, you can view event logs, the status of the camera, and upgrade the camera's firmware. Select the **Maintenance** button, and the **Maintenance** screen displays. The fields, drop-down lists, and radio buttons on this screen are described in the sections below.

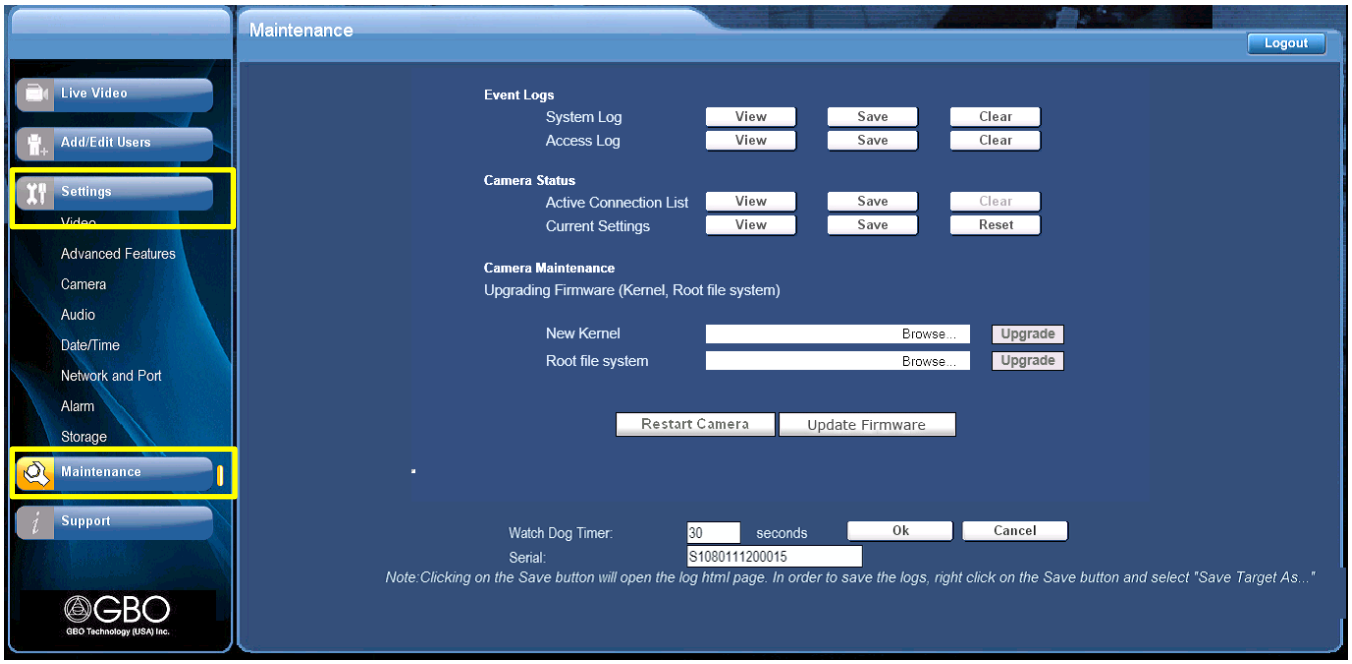


Figure 20.1 Maintenance Screen

NOTE:

Some of the operations on this screen ask the user to re-authenticate with username and password.

20.1 EVENT LOGS

There are two types of Event logs: **System** logs and **Access** logs. The user can **View**, **Save** and **Clear** these logs using the adjacent buttons.

20.1.1 System Logs

20.1.1.1 VIEW

Click on the **View** button and the **Events: System Log Screen** (see Figure 20.2) opens. The table shows detailed system related logs from the camera, including date, time and events. Click on the **Back** button to return to the **Maintenance** screen.

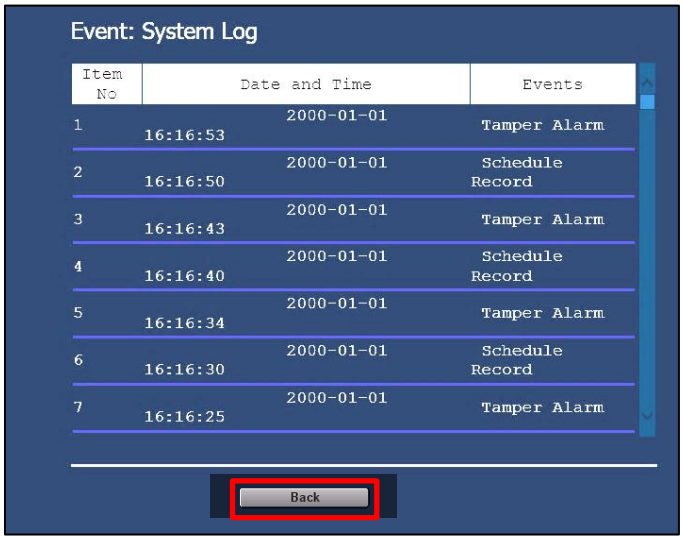


Figure 20.2 Event: System Log

20.1.1.2 SAVE

Right-click on the **Save** button, and the log html screen opens. Click on **Save Target As.** Enter the file name and click on the **Save** button.

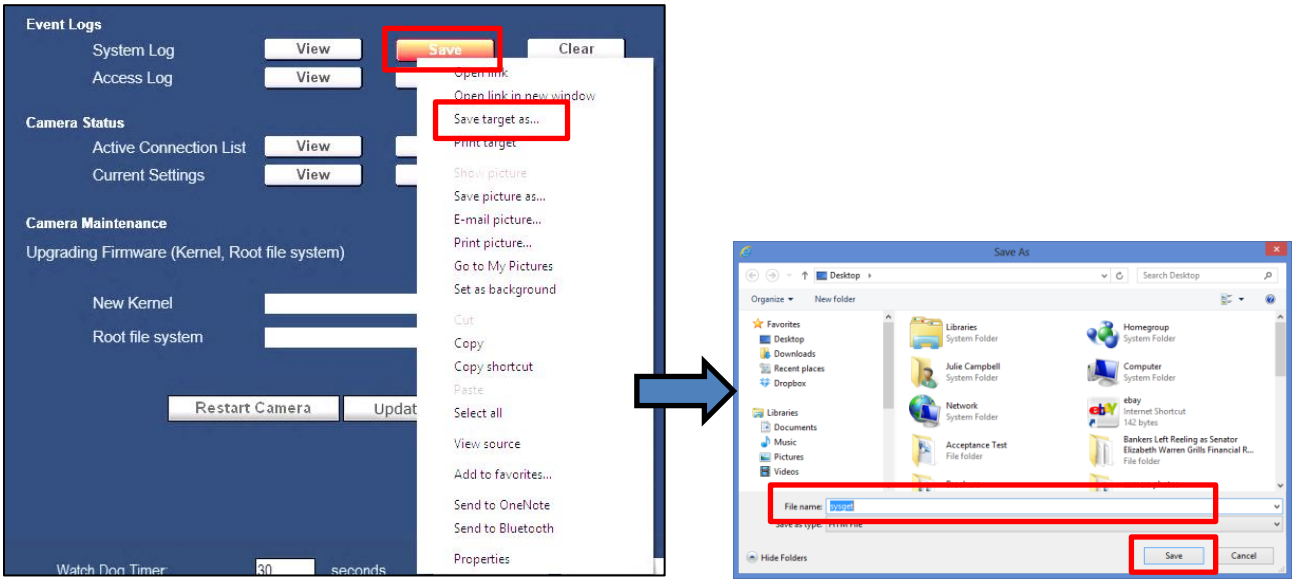


Figure 20.3 Log html and Save as Screens

20.1.1.3 CLEAR

Click on the **Clear** button to **delete all of the log entries**. Enter **User name** and **Password** into the **Security** dialog box and click on the **Ok** button to complete the procedure.

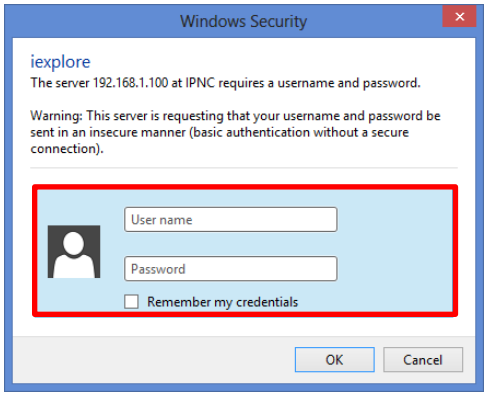

Windows Security
iexplore
The server 192.168.1.100 at IPNC requires a username and password.
Warning: This server is requesting that your username and password be sent in an insecure manner (basic authentication without a secure connection).
User name
Password
Remember my credentials
OK
Cancel

Figure 20.4 Windows Security Dialog Box

20.1.2 Access Logs

20.1.2.1 VIEW

Click on the **View** button and the **Events: Access Log Screen** (see Figure 20.5) opens. The table shows detailed access related logs from the camera, including date, time and events. Click on the **Back** button to return to the **Maintenance** screen.

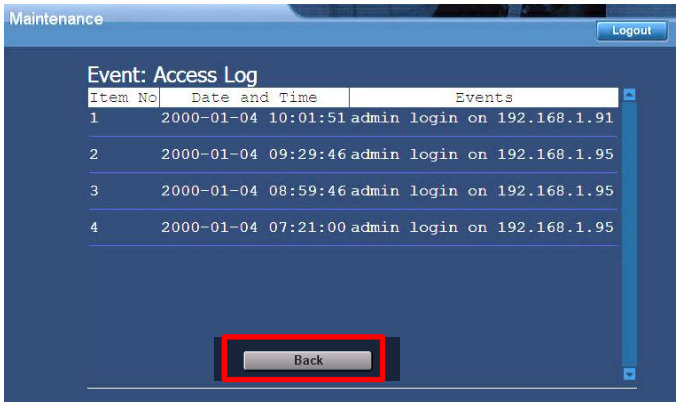


Figure 20.5 Event: Access Log

20.1.2.2 SAVE

Right-click on the **Save** button, and the **Log html Screen** opens (see Figure 20.3). Click on **Save Target As**. Enter the file name and click on the **Save** button.

20.1.2.3 CLEAR

Click on the **Clear** button to **delete all of the log entries.** Enter **User name** and **Password** into the **Security** dialog box (see Figure 20.4) and click on the **Ok** button to complete the procedure.

20.2 CAMERA STATUS

There are two types of **Camera status logs: Active Connection List** and **Current Settings** logs. The user can **View**, **Save, Clear**, and **Reset** these logs using the adjacent buttons.

20.2.1 Active Connection List

20.2.1.1 VIEW

The table shown in the **Event: Connection List Screen** (see Figure 20.6) shows connection related logs from the camera, including **Item Number**, **Date and Time**, and **Events**. Click on the **Back** button to return to the **Maintenance** screen.

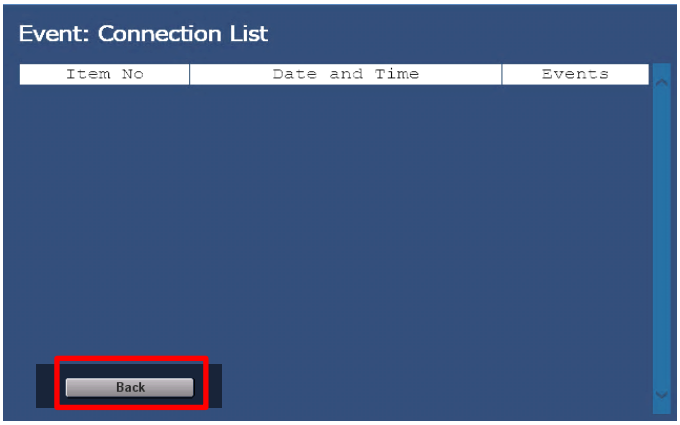


Figure 20.6 Event: Connection List

20.2.1.2 SAVE

Right-click on the **Save** button, and the **Log html Screen** opens (see Figure 20.3). Click on **Save Target As.** Enter the file name and click on the **Save** button.

20.2.1.3 CLEAR

Click on the **Clear** button to **delete all of the log entries**. Enter **User name** and **Password** into the **Security** dialog box (see Figure 20.4) and click on the **Ok** button to complete the procedure.

20.2.2 Current Settings

20.2.2.1 VIEW

The table shown in the **Current Parameter List** (see Figure 20.7), shows logs from the camera, including **Parameter Name**, **Current Value**, and **Default Value.** Click on the **Back** button to return to the **Maintenance** screen.

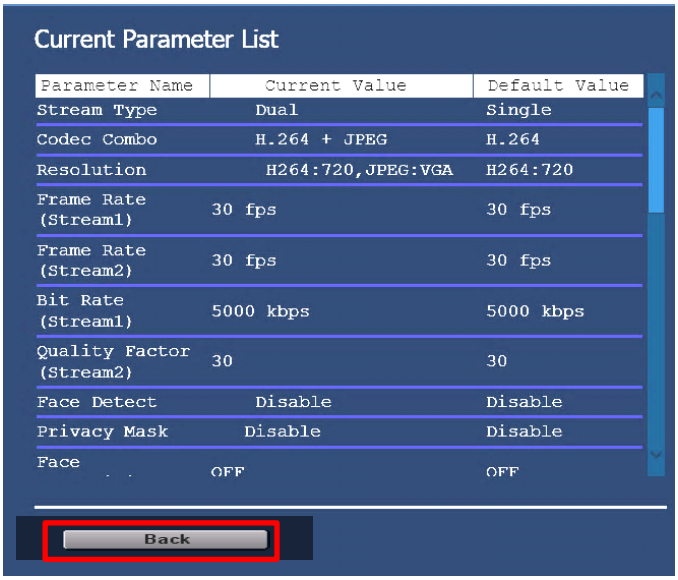


Figure 20.7 Current Parameter List

20.2.2.2 SAVE

Right-click on the **Save** button, and the **Log html Screen** opens (see Figure 20.3). Click on **Save Target As**. Enter the file name and click on the **Save** button.

20.2.2.3 RESET

CAUTION!

In order to keep the IP address settings when the **RESET** option is used, ensure that the **Keep Network Settings while reset parameters to default** checkbox is checked (enabled) on the **Network and Port** screen (see Figure 16.2).

Click on the **Reset** button to use the **RESET** option. A Message dialog box opens asking, "It wil restart the camera. Are you Sure?" Click on the OK button to proceed with the reset.

Figure 20.8 Reset Button

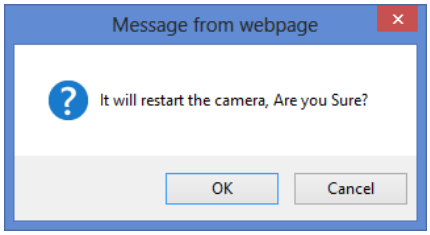


Figure 20.9 Message Dialog Box

20.3 CAMERA MAINTENANCE

To upgrade the **New Kernel** or **Root File System**, click on the appropriate **Browse** button, browse to the folder and select it. Then click on the **Upgrade** button to upload the file. A **Message** dialog box opens stating, "All scheduled recordings will be stopped. Do you really want to upgrade?" Click on the **OK** button to proceed with the reset.

Close and re-open your browser whenever the camera firmwre is updated.

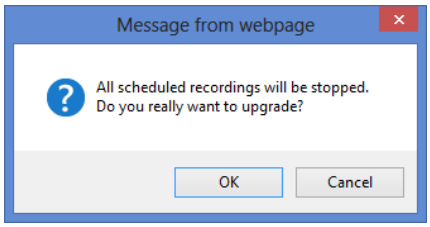


Figure 20.10 Message Dialog Box

NOTES:

1. When specifying the new kernel image for upgrade, the file name must start with "uImage_", otherwise this process will fail. When specifying the new root file system for upgrade, the file name must start with "ipnc_", otherwise this process will fail.
2. During the upgrade process, ensure that there are **no user interactions** with the camera Web Browser GUI and that **no other camera settings are being changed**. Performing either one of these two actions can cause the camera to abort the upgrade process, and the subsequent reboot can result in erratic behavior.

Table 20-1 Upgrading Firmware

Upgrading Firmware	
New Kernel:	New ulmage file for upgrade.
Root File System	New root file system file for upgrade.

20.4 RESTART CAMERA BUTTON

Click on the **Restart Camera** button to reboot the camera. It takes 30 seconds to complete this process. The user is asked to re-authenticate with their **Username** and **Password**.

20.5 UPDATE FIRMWARE BUTTON

Click on the **Update Firmware** button to automatically update the firmware. The **Updating** message displays during this process.

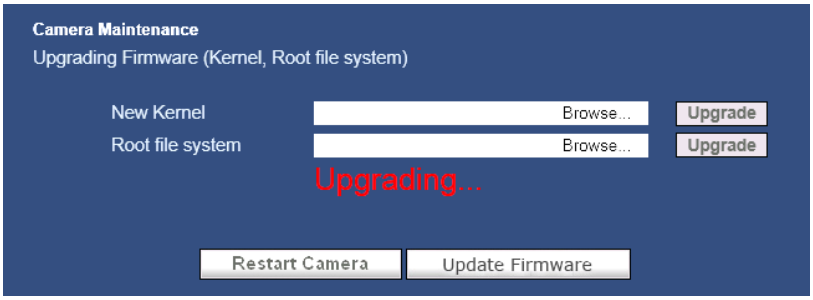


Figure 20.11 Upgrading Firmware Notification

20.6 WATCHDOG TIMER

The camera automatically recovers if the system hangs up for the user-specified length of time (10 seconds is the default). Enter the time in seconds, up to 30 seconds.

Click on the **Ok** button to save any changes and wait for the changes to take effect.

21.0 SUPPORT SCREEN

At this screen, you see a listing of the camera information. Select the **Support** button, and the **Support** screen displays. The fields, drop-down lists, and radio buttons on this screen are described in the sections below.

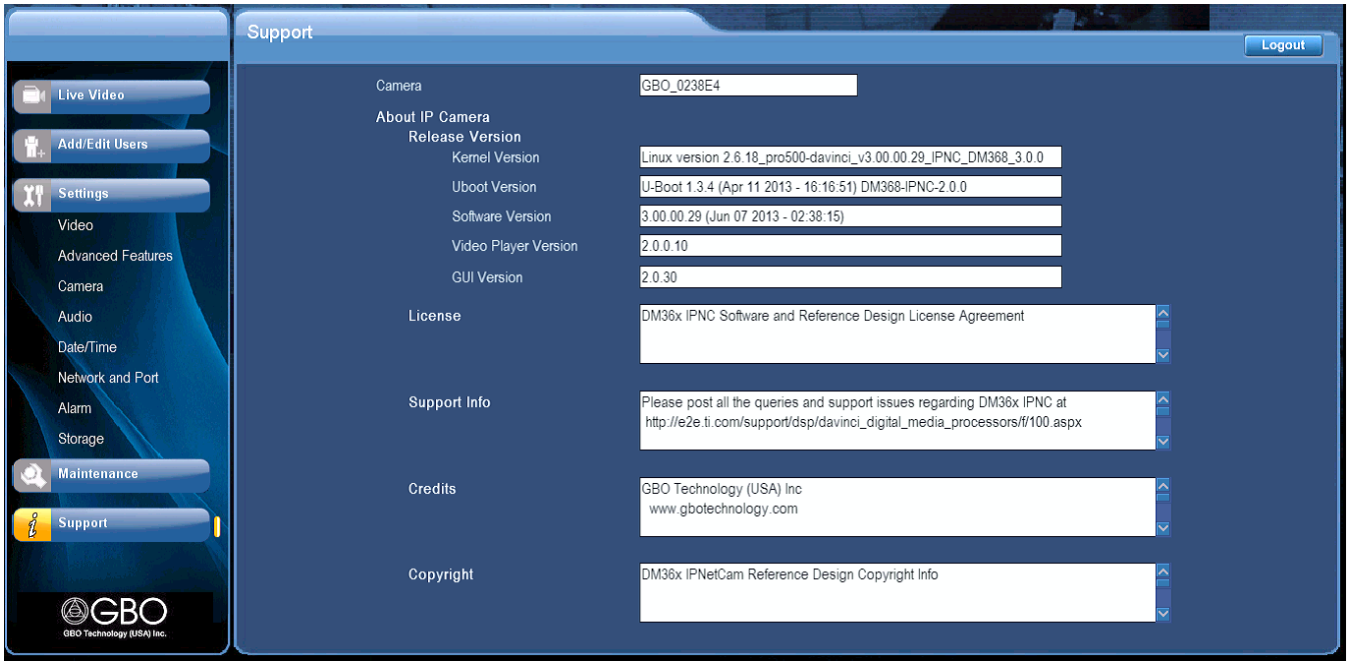


Figure 21.1 Support Screen

21.1 ABOUT IP CAMERA

Release Version information is shown in the table below.

Table 21-1 Release Version Information

Release Version Information	
Kernal Version	specifies the version of the Linux Kernel running in the camera
UBoot Version	specifies the version of the u-boot running in the camera
Software Version	specifies the version of the application software running in the camera
Video Player Version	specifies the version of the in-browser player running on the PC
GUI Version	specifies the version of the Web UI running on the PC

21.2 LICENSE DETAILS

User can scroll through this section for details on the License.

21.3 SUPPORT INFO

User can scroll through this section for all Support-related information.

21.4 CREDITS

User can scroll through this section for the Credits-related information.

21.5 COPYRIGHT

User can scroll through this section for the copyright information.

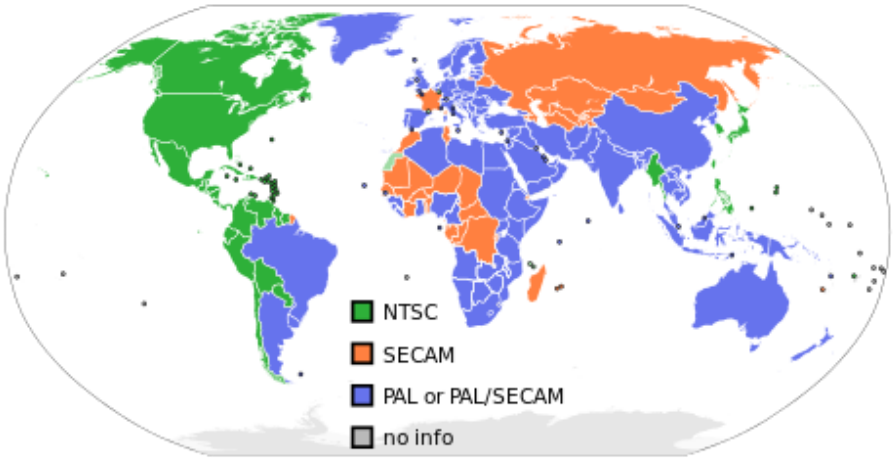
APPENDIX A DEFINITIONS

Table A-1 – Definitions

Acronym/ Abbreviation	Definition
16-bit WDR	16-bit Wide Dynamic Range
ActiveX Controls	ActiveX is a technology introduced by Microsoft in 1996 as part of the OLE framework. It includes a collection of prewritten software components that developers can implement within an application or webpage. This provides a simple way for programmers to add extra functionality to their software or website without writing code from scratch.
AES	Auto Electronic Shutter
AVI	Audio Video Interleave multimedia container format
bitrate	Bitrate describes the rate at which bits are transferred from one location to another. In other words, it measures how much data is transmitted in a given amount of time. Bitrate is commonly measured in bits per second (bps), kilobits per second (Kbps), or megabits per second (Mbps). For example, a DSL connection may be able to download data at 768 kbps, while a Firewire 800 connection can transfer data up to 800 Mbps.
CMOS	Complementary Metal Oxide Semiconductor (CMOS)
Codec	"Codec" is short for "coder-decoder," which is what a codec does. Most audio and video formats use some sort of compression, so that they don't take up a huge amount of disk space. Audio and video files are compressed with a certain codec when they are saved, and then decompressed by the codec when they are played back. Common codecs include MPEG and AVI for video files and WAV and AIFF for audio files. Codecs can also be used to compress streaming media (live audio and video) which makes it possible to broadcast a live audio or video clip over a broadband Internet connection.
DC IRIS	Direct Control Iris An automatically adjustable iris opening that responds to changes in light levels. It uses an analog signal (often analog video signal) to control the iris opening.
DHCP	Dynamic Host Configuration Protocol
DIP switch	Dual Inline Package Switch One of a set of small on-off switches mounted in computer hardware; used in place of jumpers to configure the machine for a user
Ethernet	Ethernet is the most common type of connection computers use in a local area network (LAN). An Ethernet port looks much like a regular phone jack, but it is slightly wider. This port can be used to connect your computer to another computer, a local network, or an external DSL or cable modem.
FPGA	Field-Programmable Gate Array
fps	Frames per second

Acronym/ Abbreviation	Definition
Frame rate	In the PAL and SECAM world (Europe), TV works at 25 frames per second. In the NTSC world (USA) TV works at 29.97 frames per second. Movies work at 24 frames per second in the PAL/SECAM world, and at 23.976 frames per second in the NTSC world.
FTP	File Transfer Protocol
GUI	Graphical user interface
H.264	H.264 is a next-generation video compression format. H.264 is also known as MPEG-4 AVC. Developed for use in high-definition systems, such as HDTV, Blu-ray and HD DVD, as well as low-resolution portable devices, such as Sony's PSP and Apple's iPod. H.264 offers better quality at lower file sizes than both MPEG-2 and MPEG-4 ASP (DivX or XviD).
H.264 Profile Base Main High	H.264 supports some encoding profiles (Base, Main, High). These profiles represent a sub-set of the encoding techniques available in H.264. This is useful to target decoders with very different decoding capabilities (memory and processing power in primus). The **base** profile supports only a limited subset of techniques, so it is simpler to design, requires less code and less processing power, and is aimed at low power devices. The **Main** profile supports the majority of encoding techniques, so it need more code, more memory and more processing power on the decoder side. The **High** profile supports virtually all the H264's encoding techniques. It is designed for HD and Full HD (Blueray and HD Satellite broadcast) and it's usually supported by software decoders, too.
histogram	A statistical bar graph of a frequency distribution in which vertical rectangles of different heights are proportionate to corresponding frequencies.
HTTP	Hyper Text Transfer Protocol This is the protocol used to transfer data over the World Wide Web.
I frame	In the field of video compression a video frame is compressed using different algorithms with different advantages and disadvantages, centered mainly around amount of data compression. These different algorithms for video frames are called picture types or frame types. The three major picture types used in the different video algorithms are I, P and B. They are different in the following characteristics: ➢ **I**-frames are the least compressible, but don't require other video frames to decode. ➢ **P**-frames can use data from previous frames to decompress and are more compressible than I-frames. ➢ **B**-frames can use both previous and forward frames for data reference to get the highest amount of data compression
icon	An icon is a visual representation of something on your computer.
IP	Internet Protocol
IP ratio	One I frame is inserted

Acronym/ Abbreviation	Definition
IR-cut filter	Infrared cut-off filters are used in digital optical equipment, such as cameras, video recorders and astronomical telescopes, to limit the amount of infrared radiation that reaches their delicate CCD and CMOS imagers. These imagers are very sensitive to infrared radiation, which can cause a color shift in the final image. Using an infrared cut-off filter will reduce or prevent this color shift.
LAN/POE	Local Area Network/Power Over Ethernet
LED	Light emitting diode
Low latency	Low latency allows human-unnoticeable delays between an input being processed and the corresponding output providing real-time characteristics.
lux	The lux (symbol: lx) is the SI (International System of Units) unit of illuminance and luminous emittance, measuring luminous flux per unit area. It is equal to one lumen per square meter. In photometry, this is used as a measure of the intensity, as perceived by the human eye, of light that hits or passes through a surface. It is the standardized model of human visual brightness perception,
MAC address	Media Access Control address is a hardware identification number that uniquely identifies each device on a network. The MAC address is manufactured into every network card, such as an Ethernet card or Wi-Fi card, and therefore, cannot be changed.
MBs	Macro Blocks
MJPEG	In multimedia, Motion JPEG (M-JPEG or MJPEG) is a video format in which each video frame or interlaced field of a digital video sequence is separately compressed as a JPEG image. Originally developed for multimedia PC applications, M-JPEG is now used by video-capture devices such as digital cameras, IP cameras, and webcams; and by non-linear video editing systems.
MPEG4	Moving Picture Experts Group refers to a type of multimedia file, which is denoted by the file extension ".mpg" or ".mpeg." These files are compressed movies that can contain both audio and video. Though they are compressed, MPEG files maintain most of the original quality of the uncompressed movie.
NAND	Logic gate NAND - AND followed by NOT: False only if A and B are both True
ND Shutter	In photography and optics, a neutral density filter or ND filter is a filter that reduces or modifies intensity of all wavelengths or colors of light equally, giving no changes in hue of color rendition. It can be a colorless (clear) or grey filter. The purpose of a standard photographic neutral density filter is to allow the photographer greater flexibility to change the aperture, exposure time and/or motion blur of subject in different situations and atmospheric conditions. The use of an ND filter allows the photographer to utilize a larger aperture that is at or below the diffraction limit, that varies depending on the size of the sensory medium (film or digital) and for many cameras, is between f/8 and f/11, with smaller sensory medium sizes needing larger sized apertures, and larger ones able to use smaller apertures. ND filters can also be used to reduce the depth of field of an image (by allowing the use of a larger aperture) where otherwise not possible due to a maximum shutter speed limit.

Acronym/ Abbreviation	Definition
NTSC	National Transmission Standards Committee In NTSC countries, use a multiple of 60; in PAL countries, use a multiple of 50. 
NVR	Network Video Recorder
ONVIF v1.02 compliance	Open Network Video Interface Forum The updated Test Tool (v1.02.4) and the accompanying Test Specification represents the continuing work of ONVIF's Technical Services Committee to enhance and refine the ONVIF specification and the testing parameters by which products are declared to conform to the ONVIF specification.
OSD	On-screen Display
PAL	Phase Alternating Link In PAL countries, use a multiple of 50; in NTSC countries, use a multiple of 60 (also see NTSC).
PC	Personal Computer
POE 802.3af	Power-over Ethernet standard
Profile	See H.264 profile
QP mode	Quantization Parameter Rate control: by means of a "virtual buffer", sets the reference value of the quantization parameter for each macro block.
Quality Factor	A multiplication factor used to ensure that graphics or image file size i.e., amount of information is sufficient for requisite quality. The normal requirement is that file size should be sufficient for 1.25 to a maximum of 2 times the screen or output frequency.
QVGA	Quarter Video Graphics Array (320 x 240)
Rate control	Frame rate control allows the network camera to send images only at the specified frame rate.

Acronym/ Abbreviation	Definition
RGB	Stands for "Red Green Blue." It refers to the three hues of light (red, green, and blue, that can mix together to form any color. When the highest intensity of each color is mixed together, white light is created. When each hue is set to zero intensity, the result is black.
RTSP	Real Time Streaming Protocol
SD/MMC	SD (Secure Digital) memory is a small card, most commonly the size of a postage stamp, which is used in a wide variety of multimedia devices. SD cards are a form of solid-state memory device known as Flash memory. Because it is solid-state memory, as opposed to the magnetic memory used in normal hard drives, it is much more durable and is not damaged when it comes in close proximity to a magnet. SD cards were developed to be competition for MMCs (MultiMediaCards).
SDHC card	Secure Digital High Capacity cards are high-capacity flash memory cards.
Shutter speed	Shutter speed is the effective length of time a camera's shutter is open. Shutter speed is a parameter that controls how long light is hitting the sensor. It is usually measured in parts of a second (30 means 1/30s, that is, "a thirtieth of a second").
Shutter time	A shutter cycle is a process in which the shutter doors will open, close and reset. After resetting, the shutter will be ready to open again. There is a lag time between pressing the shutter release and the camera responding to your command.
SMPT	Simultaneous MAC Packet Transmission
SNTP	Standard Network Time Protocol
SXVGA	Super Extended Video Graphics Array (1280 x 960)
UPnP	User Plug and Play
USB	Universal Serial Bus
VGA	Video Graphics Accelerator (320x240)
Video codec	See codec
VMS	Video Management System
White balance	White balance is the process of removing unrealistic color casts, so that objects that appear white in person are rendered white in a photo. Proper camera white balance has to take into account the "color temperature" of a light source, which refers to the relative warmth or coolness of white light. Our eyes are very good at judging what is white under different light sources, but digital cameras often have great difficulty with auto white balance (AWB) — and can create unsightly blue, orange, or even green color casts.